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Kitchen planning goes on a "tailor-made" basis at the J. L. Hudson Co. department store in Detroit. Trained personnel and attractive displays described as needs in making prospect a buyer. **Page 10.**

* * *

Can money be made in air conditioning? This week's editorial tells why packaged air conditioning, led by the window-type air cooler, can put the "profit stamp" on air conditioning for distributors and dealers. **Page 14.**

* * *

Out in Hooper, Neb., a locker plant with only one coil and one compressor for 100 lockers was recently installed. It was done with transoms. **Page 16.**

* * *

The new "What's New" section describes latest product developments for the refrigeration and air conditioning trade. **Pages 20 and 21.**

* * *

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* * *

Can air conditioning put an end to grouchiness? A doctor thinks it might. **Page 18.**

* * *

A small-town dealer finds that farmers will buy appliances, but they must be met more than "half way." **Page 23.**

* * *

How and when to bring a unit's oil charge to its proper level is explained by P. B. Reed of Servel, in an article of special interest to service and installation men. **Page 19.**

Crosley, General Electric, Norge and Westinghouse 1940 Retail Price Schedules Dive To All-Time Lows

Crosley

In major price reductions affecting every model in its 1940 electric refrigerator line, Crosley has dropped the list price of its 6-cu. ft. special unit to $99.95, and has lowered its other 6-cu. ft. models to $119.95, $139.95, and $149.95. The price changes were effective Feb. 2.

Models of 8-cu. ft. size in the line are now listed at $169.95 and $189.95. All prices include cost of the five-year warranty plan.

None of the special Crosley features, such as the Shelvador and the Freezorcold, have been sacrificed in effecting the lower prices, it was emphasized by Thomas W. Berger,

(Concluded on Page 2, Column 3)

General Electric

Reductions of from $5 to $25 under the previously established list prices on refrigerators in its 1940 line have been announced by General Electric, effective Feb. 1.

Price leader of the line is a special 6-cu. ft. unit, the LB6-B, with a list price of $112.75. Another 6-cu. ft. model in the special series has a retail price of $139.75, a drop of $20 from the previously established price, while the 6-cu. ft. unit in the standard series also has been cut $20, listing at $169.75.

Another major price reduction has been made in the LB8, the 8-cu. ft. unit in the special series. This unit

(Concluded on Page 2, Column 3)

Norge

Completing the recently presented line of new 1940 Norge Rollator refrigerators, Norge Division, Borg-Warner Corp., announced Feb. 5 four models at prices ranging from $112.75 to $179.95.

Leader of the group is an oversize six, which lists at $112.75, f.o.b. factory, or nearly $40 below any comparable six previously produced by Norge. In addition, there are two new extra-capacity sixes listing respectively at $137.75 and $159.95, the latter said to establish new low price levels in the all-porcelain field, and finally a "large package" super-eight of nearly 9 cu. ft. actual ca-

(Concluded on Page 2, Column 2)

Westinghouse

Price reductions on the entire line of Westinghouse electric refrigerators, effective Feb. 1, range from $5 to $17 under those previously established for 1940 models, and are as much as $35 below the 1939 level, reports Frank R. Kohnstamm, sales manager of the merchandising division.

Feature of the line under the new price schedule is a 6-cu. ft. model retailing at $112.75 in the Mansfield zone, and slightly higher in other areas. This is an addition to the 1940 line, and is $40 under any previously announced 1940 price.

Earlier, the company had offered,

(Concluded on Page 2, Column 2)

Hertzler Is York Sales Manager

JOHN R. HERTZLER

* * *

YORK, Pa.—John R. Hertzler has been appointed general sales manager of York Ice Machinery Corp., and Ralph B. Meisenhelder has been named assistant to the president of the corporation, it was announced last week by Stewart E. Lauer, president.

Mr. Hertzler was graduated from Lehigh university in 1927 with a B.S. degree in mechanical engineering, and is a member of Tau Beta Pi, honorary engineering fraternity. He entered the York sales student train-

(Concluded on Page 24, Column 2)

Kelvinator Boosts Production 3rd Time; Pierce Disclaims 'Price War' Intentions

* * *

DETROIT—For the third time since the beginning of the year, production in the Kelvinator and Leonard refrigerator plants of Nash-Kelvinator Corp. has been increased. Orders from dealers for 1940 model electric refrigerators have exceeded original quotas, Frank R. Pierce, general sales manager of the Kelvinator division, reports. The boom business, he believes, is a result of the 1940 program, which was launched Jan. 11, and in which refrigerator prices were reduced $30 to $60.

All sales records for January fell long before the month ended as dealers began stocking the new refrigerators in quota-breaking quantities in preparation for what Kelvinator officials believe will be one of its biggest business years. In major markets like New York City, Boston, and Philadelphia deliveries to dealers were double and even triple those of January a year ago.

Mr. Pierce denies that his company is engaging in a price war, as has been charged in some quarters. He explains:

"The prices we have set are fair to the buying public, retailers, and to the company.

"To everyone's surprise, this entire program has been accomplished without reduction in dealers' retail margins, and without any sacrifice what-

(Concluded on Page 2, Column 4)

N. Y. Dealers Asking A Law To Subdue 'Discount' Buying

NEW YORK CITY—Adoption in this state of a law prohibiting discount purchases by employes of large industrial concerns, similar to the one now in effect in Wisconsin, is urged in a letter sent to State Senator P. W. Williamson by the League of Metropolitan Appliance Dealers.

The letter, signed by Thomas W. Bolger, executive secretary of the dealer association, asserts that "more than a billion dollars of business is diverted every year from legitimate retail channels" through these discount buying practices, which calls attention to the Wisconsin statute which outlaws the practice under penalty of stiff fines.

"The lot of the retailer in order to make both ends meet is very difficult at any time, but more so during the past several years," the letter points out. Metropolitan Life Insurance Co. is mentioned as being the sponsor of a discount house in its own building under the name of Madison Cooperative Association.

The letter invites the legislator to meet with a committee from the

(Concluded on Page 4, Column 5)

FTC Investigation on Cost of Distribution Looms For Industry

WASHINGTON, D. C.—Effect of major appliance trade-ins on the cost of distribution will be studied by Federal Trade Commission this year as part of a general inquiry on distribution costs and methods, outlined recently at a hearing before a House sub-committee considering the Independent Offices Appropriation Bill for 1941. FTC asks $88,000 for the investigation.

General purpose of the inquiry is to find out why distribution costs have increased while production costs have been reduced. More than half of the final cost to the consumer of all commodities is estimated to consist of distribution costs, FTC economists assert. The electrical appliance industry is one of a special group on which data will be gathered.

In some businesses, retail mark-ups have increased as much as 60% in recent years, FTC declares, while in other fields mark-ups as high as 200% are now to be found. It is claimed that, in some instances, "the benefits which should go to the consumer from discoveries and improvements developed in research laboratories are absorbed by expensive distribution methods."

The investigation, it is claimed, would result in the elimination of certain expensive methods, and benefit both producers and consumers. Individual manufacturers "cannot themselves correct these evils," it was declared.

There is some question, the House committee was told, whether national advertising is not actually rendering the consumer a disservice. Force of the growing consumer movement is recognized as one of the factors prompting the investigation.

Start of the inquiry is scheduled for sometime after July 1, following completion of the current probe into resale price maintenance legislation and its effects which the FTC is conducting.

296,846 Ranges Sold In 1939, Gain of 20%

NEW YORK CITY—Electric range shipments to U. S. distributors and dealers during 1939 totaled 296,846 units, an increase of approximately 20% over the 247,662 units shipped during the previous year, according to reports of manufacturers to National Electrical Manufacturers Association.

December shipments were about the same as those for that month in 1938, totaling 13,429 units as compared with 13,576 in the previous year. Figures for 1939 include reports of from 17 to 19 manufacturers, as compared with 16 companies for 1938.

Network Television Has First Demonstration

SCHENECTADY, N. Y.—Network television, long a goal of radio experimenters and scientists, was demonstrated successfully to Federal Communications Commission members here Feb. 1 by General Electric engineers.

This demonstration, first of its kind in history, in which a program transmitted from New York City was clearly received in Schenectady homes 142 air line miles away, was

(Concluded on Page 24, Column 1)

York 1940 Meeting Series To Open Feb. 10 In N. Y.

YORK, Pa.—First of a series of sales conventions which will serve to introduce York Ice Machinery Corp.'s 1940 commercial refrigeration and air conditioning line to dealers throughout the country will be held at the Astor hotel, New York City, on Saturday, Feb. 10, reports J. E. Rosenmiller, sales promotion manager.

Chicago session will be held at the Drake hotel on Feb. 15. Both sessions will begin at 9:30 a.m.

30-Ton Air Conditioning System In Oklahoma Runs For $1.69 Per Day

MUSKOGEE, Okla. — Operating costs of a 30-ton air conditioning system serving two floors of the Barnes building here averaged $2.49 per day through the summer months and $1.69 per day on a year-around basis, according to a survey made last year.

The operating check was also made in the Empire Cafe, where a 10-ton system is in operation. Cooling the cafe from May through November cost an average of $1.79 per day.

According to Michael Barr, engineer for Durnil's (Carrier distributor), which made the installation, the Barnes building was a compressor capacity of 30 hp.; with fans, pumps, and auxiliaries adding up to six additional horsepower, making a total of 36 installed horsepower. Operating cost for the months of April through October was proven on a check meter to be $534.28 or $2.49 per day.

Operating cost for the remainder

(Concluded on Page 24, Column 2)

Three Modern Beauties

Yvonne Gillespie of Detroit shows her friend, Charlene Osgood, the newest Norge refrigerator. Listing at $112.75 f.o.b. Muskegon, this model is known as the Viking Special Six. Three other new Norge models were announced this week to complete the Norge 1940 line.

Par's Parent Company Earned $354,685

DEFIANCE, Ohio—Modern Equipment Corp. and its parent company, Lynch Corp., Anderson, Ind., report an indicated profit for 1939 of $354,685, prior to audit and after provision for taxes, as compared with $329,419 for the year 1938.

Business booked by Modern Equipment Corp. in January was 30% higher than in the same month last year, reports W. C. Allen, vice president in charge of sales. Encouraging interest in Par equipment was demonstrated at the All-Industry Show in Chicago last month, and at the Automotive Aftermarket Show at the Navy Pier in December, he said.

Will Aid Lauer

RALPH B. MEISENHELDER
Named assistant to S. E. Lauer, president of York Ice Machinery Corp.

EH & FA Reports Gain In Finance Plan Users

WASHINGTON, D. C.—The number of utilities using the financing plan of the Electric Home & Farm Authority has increased 76% during the past year and now totals 420, Charles A. Suppler, assistant general manager of the agency, told a House of Representatives sub-committee recently in explaining a request for an increase of $100,000 in the independent offices appropriation bill for 1941.

Because of rapidly expanding operations, the additional sum is needed to set up new offices throughout the country, Mr. Suppler declared. Present plans call for a new disbursing office either in Portland, Ore. or Austin, Tex., and an office in Washington, D. C. to handle paper resulting from increased business in Virginia, the Carolinas, and Pennsylvania.

Commenting on the increased use by utilities of the EHFA plan, Mr. Suppler told the committee that the power companies are widely discontinuing use of their funds in financing appliances, preferring to put them to work in construction and other purposes. Utilities now cooperating with the authority, he said, include 36 which are privately owned, 125 municipally owned, and 259 owned by cooperatives, or by state and federal government.

The number of appliance dealers using the EHFA financing plan during the past year was 2,449. Families purchasing major appliances and wiring during the period were 89,992.

Financing terms of EHFA continue to be more favorable than those of many private finance companies, he said. The Authority's requirement of a minimum down payment of 5% of the cash purchase price of an appliance is just half of the 10% required by practically all private finance companies. By permitting longer contract maturities, up to 36 months in some instances, said Mr. Suppler, the Authority makes it possible for many consumers with small incomes to purchase and use appliances.

Refrigerator Prices

Westinghouse

(Concluded from Page 1, Column 5)

not as a part of the 1940 line, a close-out of a 1939 model priced at $129.50. This model has been redesigned and put into production as part of the 1940 line at $112.75.

Proportionately lower prices have been established on other models. Another 6-cu. ft. unit in the Special series has been cut from $152.50 to $137.75. An 8-cu. ft. model in the same series, previously priced at $192.00, has been reduced to $177.75. The Meat-Keeper has been included on these models for the first time as standard equipment.

In the Hostess series, the H-5 has been cut from $167.50 to $157.75, and the H-6 has been reduced from $182.50 to $172.75. This is the medium priced line, and all models are equipped with Meat-Keeper and vegetable crispers.

The Aristocrat 5-cu. ft. model, A-5, has been lowered from $187.50 to $182.75, and the 6-cu. ft. model has been cut from $207.50 to $197.50. This is the deluxe line, and includes all convenience features.

Not only have prices on the Westinghouse line been reduced, Mr. Kohnstamm pointed out, but the value has been enhanced by the addition of the convenience features noted above.

In addition to the price reductions, Mr. Kohnstamm said, increased effort is being put behind the sale of refrigerators through the company's augmented newspaper, magazine, and radio advertising campaigns, announced recently.

Norge

(Concluded from Page 1, Column 4)

pacity which lists at $179.95.

Probably the most important model in the Norge low-priced line is the new Viking porcelain six. Bearing a price tag of $159.95, it is asserted to be the only all-porcelain refrigerator selling within $70 of that figure. In its shelf area, cabinet capacity of 6.20 cu. ft. and interior arrangement and appointments, this refrigerator closely approximates the specifications of the Viking Deluxe Six.

President Howard Blood explains that Norge has been able to produce an all-porcelain refrigerator at such a price only because the company operates its own porcelain plant at Muskegon, Mich. At this factory are fabricated porcelain interiors used in all Norge refrigerators as well as outside porcelain wall panels for the Viking porcelain six and for other Norge all-porcelain models of higher price.

Lowest priced unit in the new group has been christened the Viking Special Six. It is powered with the same hermetically sealed and permanently oiled Norge "Royal" Rollator compressor employed in the most expensive Norge models.

The heavily insulated steel cabinet of the "Viking" special six, finished externally with white Norgloss and internally with porcelain, provides 6.20 cu. ft. of storage space and 11.95 sq. ft. of shelf area. The cabinet rises from a full black floor base and is embellished by the Norge insignia in white and gold and by chrome door hardware. The interior is automatically lighted.

Door of the stainless steel freezer, which also bears the Norge monogram, conceals two ice trays with metal grids, besides a tray of double width for fast freezing of desserts.

The Norge Rollator compressor bears the same five-year factory warranty carried by the more expensive Norge units.

Second in price among the new Norge group is the Viking deluxe six at $137.75. Two inches higher than the Viking special six, this deluxe model provides five instead of four shelf levels, increasing the shelf area to 13.23 sq. ft.

An extra touch of appearance value results from the employment of horizontal chrome flashing on the fore corners of the black base. Similar chrome treatment dresses the door of the freezer compartment.

The freezer is fitted with two mechanical "lever action" metal grid trays and a double width dessert tray with metal grids and a separator. Interior equipment advantages include a removable shelf insert for storage flexibility and a glass-covered sliding Norge Hydrovoir.

A unit that is expected to add importantly to Norge retail volume throughout 1940 is the fourth and final addition to the line, the Norge Monogram Super-Eight.

Cabinet of this model affords nearly 9 cu. ft. of storage space (exactly 8.85 cu. ft.), and it is priced at $179.95, placing it in a strongly competitive position among other low-priced eights. Six shelves, a large number in a refrigerator of this price, give a shelf area just a fraction under 20 sq. ft.

"These four new units, which raise the total number of models in the Norge refrigeration line to 16, have been placed in production and quantity shipments will go forward shortly," states Mr. Blood.

General Electric

(Concluded from Page 1, Column 3)

has been cut to $179.50, a drop of $20 from the previous list price. Model JB5 in the standard series has been reduced $15, and now lists at $159.75, while the 4-cu. ft. model in the special series has been lowered by $15, to $129.50.

Prices of models in the porcelain deluxe series, top series in the G-E line, have been reduced from $5 to $10, as have those of all other units in the four-series line.

Revised Detroit area prices, and the approximate reduction from previously established 1940 lists, are as follows:

Porcelain Deluxe Series	Price	Reduction
PB5	$214.75	$ 5.00
PB6	234.75	10.00
PB8	274.75	10.00
PB12	435.00	10.00
PB16	535.00	10.00
Deluxe Series		
B5	189.75	5.00
B6	209.75	5.00
B8	249.75	7.50
Standard Series		
B3	122.50	5.00
BY4	142.50	6.00
JB5	159.75	15.00
JB6	169.75	20.00
Special Series		
LB3	122.50	5.00
LB4	129.50	15.00
LB6B	122.75	.....
LB6	139.75	20.00
LB8	179.50	25.00

Crosley

(Concluded from Page 1, Column 2)

Crosley general sales manager. He pointed out that under the new price arrangement, there is a logical step-up clear through the line up to $249.95, price of the top Freezorcold model.

Crosley has broadened its production plans to take care of increased business expected to result from the price reduction move, Mr. Berger said.

Joins Philco Distributorship

OMAHA, Neb.—Bud Christiansen has joined the sales staff of H. C. Noll Co., distributor in this area for Philco radios and refrigerators and Philco-York air conditioners.

Firms Attack Portland Heating Ordinance

PORTLAND, Ore.—General Electric Co., Gar Wood Industries, Inc., the Waterman-Waterbury Co., and others are plaintiffs in a suit which attacks the constitutionality of the local heating and ventilating code here. The case is being tried before Circuit Judge Louis P. Hewitt, without a jury.

The Portland code prohibits the sale and installation of steel warm air furnaces using oil as a fuel unless they have combustion chambers of at least No. 8 U. S. standard gauge steel.

The plaintiffs, which include several local retailers, ask that city officials be enjoined from prohibiting the sale and installation of oil furnaces having less than the required gauge.

It is alleged that the ordinance is obsolete and that since its passage in 1935 there have come into general use oil furnaces with forced air draft, automatically controlled, so that the fuel supply is cut off in the event of excessive heat.

Pierce Gives Kelvinator Price-Reduction Stand

(Concluded from Page 1, Column 4)

ever in the high quality for which our products have become famous.

"Here are the things we did.

"We concentrated 96% of our production on the big 6-cu. ft. models and larger (the size refrigerator people really need). This permitted us to lower prices somewhat.

"We anticipated an increase in business as a result of our new program, and doubled our production schedules. This was another saving which we passed along to buyers.

"We made other economies by cutting the manufacturing profit per unit, and we passed these savings along."

Westinghouse Promotes Hout, Feaman & Erdmann

EAST PITTSBURGH, Pa.—Promotion of Fred B. Hout, M. M. Feaman, and George W. Erdmann has been announced by Westinghouse.

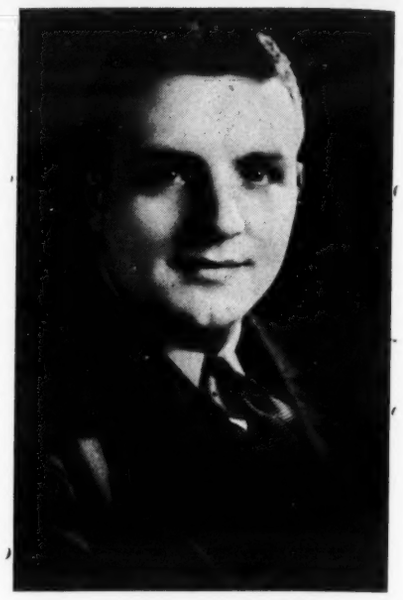
Under the new set-up, Mr. Hout is range sales development manager, Mr. Feaman heads water heater sales development, and Mr. Erdmann supervises sales training in the range and water heater department.

Mr. Hout and Mr. Feaman, in their new capacities, will serve as assistants to R. M. Beatty, recently appointed manager of the range and water heater department.

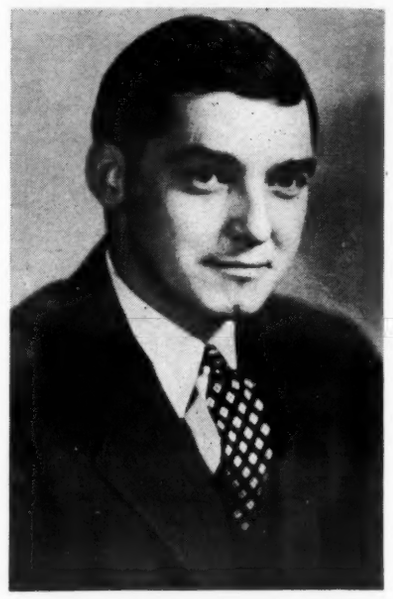
Cheyenne Refrigerator Time Sales Double

CHEYENNE, Wyo. — Cheyenne residents purchased more refrigerators and other electrical home appliances on instalment purchase plans last year than they did in 1938, according to figures compiled by the Cheyenne Credit Bureau. Refrigerator sales on time payments amounted to $64,130, as compared with $34,919 the preceding year.

Promoted By G-E



ELMER C. DVORAK



RAY RICH

* * *

Dvorak and Rich Direct G-E Range, Heater Sales

BRIDGEPORT, Conn. — Elmer C. Dvorak has been appointed sales manager of General Electric ranges, and Ray Rich has been given similar responsibilities with respect to G-E water heaters.

Mr. Dvorak has been district representative for G-E ranges and water heaters in Ohio, Michigan, Indiana, and Kentucky since 1937, and is the originator of several successful range presentations.

He began his association with G-E in 1934 in the advertising and sales promotion section, and was transferred to range and water heater activities in 1937.

Mr. Rich has been in charge of water heater sales promotion since 1938, when he was recalled to G-E headquarters from the Pacific Coast, where he had been district range and water heater specialist. He joined the G-E student engineering course in 1933, and has been connected with appliance sales since 1936.

New Storz Sales Manager

OMAHA, Neb.—Truman Ball has been made manager of the Norge division at Storz Supply Co.

NEW PEERLESS
1940
CATALOG
29 NEW PRODUCTS
GET YOUR COPY FROM YOUR PEERLESS JOBBER . . . OR WRITE THE NEAREST PEERLESS FACTORY
PEERLESS OF AMERICA, INC.
MIDWEST FACTORY, GENERAL OFFICES — 515 W. 35TH STREET, CHICAGO
NEW YORK FACTORY 41-20 34th STREET LONG ISLAND CITY
PACIFIC COAST FACTORY 3000 SOUTH MAIN ST. LOS ANGELES, CALIF.
SOUTHWEST FACTORY 2218 N. HARWOOD ST. DALLAS, TEXAS
EXPORT DIVISION P. O. BOX 636 DETROIT, MICH.

A PRE-CONVENTION MESSAGE

to YORK Distributors . . .

and those who will

Become YORK Distributors

YORK is going to spring a surprise . . . a surprise that you are going to like.

Here's only part of the story:

You'll have a new line of Yorkaire Conditioners that will open up new sources of profit . . . two lines of bottled beverage coolers . . . complete lines of beer dispensing equipment, both self-contained and remote . . . self-contained water coolers for bottlers . . . new small FlakIce machines that will set a new pace in an old industry . . . a line of reach-in refrigerators that set new standards of efficiency, are chock full of sales features . . . a complete line of York Home Heating equipment . . . and *more*, many more new profit items.

Here's well-rounded, all-season business backed by the prestige of York's fifty-five years of leadership in its field, meeting every known cooling problem in every part of the world. Your York franchise equips you now, as never before, to do business wherever there's business to be had.

Don't miss your regional convention. Come and see these new full lines of equipment with your own eyes! Get the good news first hand!

YORK ICE MACHINERY CORPORATION • YORK, PENNA.

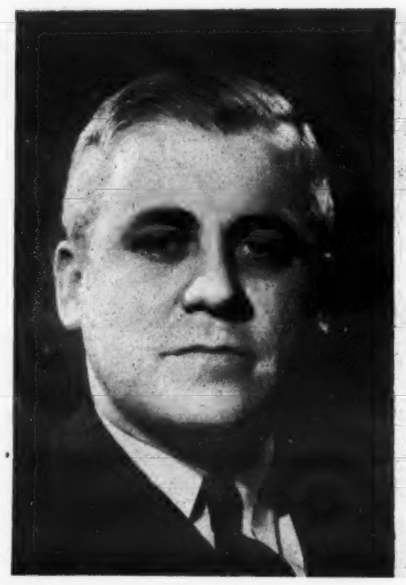
Headquarters for Mechanical Cooling Since 1885

york refrigeration air conditioning

To New Posts At Norge

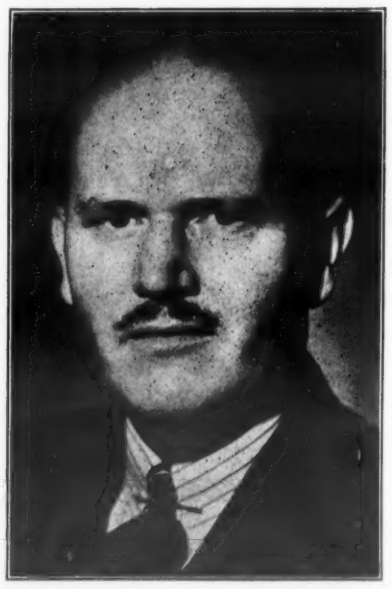
Lee Cox, formerly Pacific coast division manager, now sales manager for the Pacific coast and inter-mountain territory.

J. M. Tenney, formerly western sales manager, now manager of the company's recently expanded business development department.



S. J. McCarthy, new manager of Norge's kitchen planning and apartment house sales department.

N. M. Forsythe, former divisional manager who now is western sales manager for all Norge departments.



Charles H. MacMahon, also a former divisional manager, who has been appointed eastern sales manager for all departments.

Emmett Webster Joins Kelvinator Field Force

BIRMINGHAM, Ala. — Emmett Webster has been appointed Kelvinator sales representative in Alabama, working under C. R. Brogan, southeastern division manager, with headquarters in Atlanta. Mr. Webster formerly was associated with Wimberly & Thomas Hardware Co. of Birmingham, former Kelvinator distributor for Alabama and West Florida, which has discontinued handling the line.

W. A. Thompson, one-time manager of the department, continues with Wimberly & Thomas, and L. R. Walker, service man for this company, has opened L. R. Walker Service Co. at 519 N. 19th St. here.

Jimmie Johnson of Birmingham, formerly Kelvinator representative in Alabama, has been appointed sales representative for Leonard in Alabama, Mississippi, and Tennessee.

MOTORS AND FANS
Engineered FOR THE REFRIGERATION INDUSTRY

Matched units—motors and fans specially designed and built for the requirements of refrigeration work.

Our years of experience in making motors to meet specific Refrigeration and Air Conditioning problems enable us to produce units noted for:

- Long Life
- Lifetime Lubrication
- Quiet Efficient Operation
- Low Power Consumption

A Wide Variety of fan sizes and motor designs available. Special units designed to meet your own requirements.

RUSSELL ELECTRIC CO.
350 W. Huron St. Chicago, Ill.

Kelvinator Offers 5 Range Models; Base Price Is $119.95

DETROIT—Five electric ranges incorporating a number of modern convenience features and with prices scaled in $20 jumps from $119.95 to $199.95 comprise the 1940 line being introduced by Kelvinator.

All ranges are of one-piece welded steel construction, porcelain enameled inside and out. All cooking tops are one-piece, acid-resisting porcelain enamel, with back splash and back shelves.

Features include a new two-unit, oversize oven, measuring 16 x 16 x 19 inches; five-speed Chromalox surface units; new cooking timer with selector switch for controlling oven, appliance outlet, or Scotch Kettle cooker, and which can be arranged to control a surface unit as well.

The Kelvinator oven uses two high-wattage heating units, top unit being 2,400 watts and bottom unit 2,000, affording a combined wattage of 4,400 for preheat. Lower unit has a baffle, or heat director, which is said to assure uniform circulation of heat in the oven.

SPUN GLASS INSULATION

Heavy spun glass insulation is used on all six sides of the oven, with a full 3 inches insulating the top side. Oven lining is one-piece porcelain, inside and out.

Ovens are equipped with a combination oven switch and thermostat with automatic pre-heat cutout. When the switch is turned past the "broil" position and then back to the desired temperature, the oven is preheated with both units, and then automatically returned to the proper cooking temperature. Pilot lights tell the user when the "bake" or "broil" oven units are in use. All ovens have two sliding food racks and combination broiler and roaster pan.

Three higher price ranges have a floodlight set in the back of the oven, to illuminate the interior when rearranging or removing hot dishes or pans. Oven door is counterbalanced, and has a positive stop at the broiling position.

Chromalox surface cooking units, standard on all models, have five speeds: high, medium high, medium, low, and very low. All surface units are controlled by bi-rotary, silver contact surface switches mounted on a panel that is recessed into the front of the range to prevent knobs from catching on clothes. The panel is slanted for easy reading, and switches are individually floodlighted on the two top-priced models.

SIX-QUART SCOTCH KETTLE

All models also have a six-quart, 1,200-watt Scotch Kettle, with adjustable trivet and five-speed control for all types of cooking from fast heating to long cooking operations. In all but the lowest price model, the Scotch Kettle has a clamp-top insert pan.

The automatic cooking timer, which can be used to control the Scotch Kettle, oven, or appliance outlet, also can be arranged to control a surface unit. This is done by installing the Scotch Kettle in the utility drawer and replacing it with a surface unit.

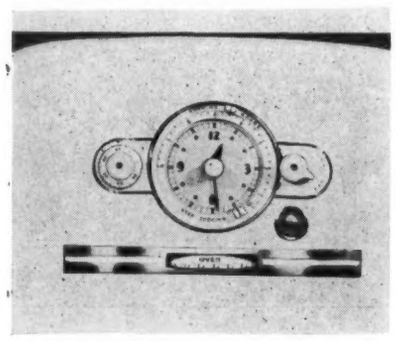
This development, it is claimed, permits the housewife to cook practically any type meal while she is away from the kitchen. The timer automatically computes the time for turning on the range; all the housewife need do is set the "stop cooking" dial at the time the meal is to be finished, and the "cooking hours" pointer to the number of hours required to cook the meal. The timer then turns on the range at the time desired.

The timer, which includes an electric clock, a minute minder, and a signal to indicate when the timer is in circuit, is built in the top model of the Kelvinator line, and is optional equipment on the other units.

Model ER-19, at $119.95, has an open front base, and is equipped with Scotch Kettle, five-speed Chromalox surface units, porcelain enamel cabinet, cooking top, work surface, and drip pan, a sliding utility drawer for storage of cooking utensils, and has an appliance outlet on the wall guard.

Model ER-29, at $139.95, is a full cabinet model, with all porcelain construction, and has a recessed toe-room base. It has all features found on the ER-19 as well, and has a clamp-top insert pan in the Scotch Kettle, and three surface units, one 8-inch and two 6½-inch.

Middle model is the ER-19, priced at $159.95, and having as "plus" features a cabinet equipped with three utility drawers, one beneath the oven and two beneath the switch panel on the left. An oven light illuminates the range interior, and a cooking-top light is standard equipment. Optional equipment includes a cooking timer and a thermostatically controlled warmer for the upper utility drawer.



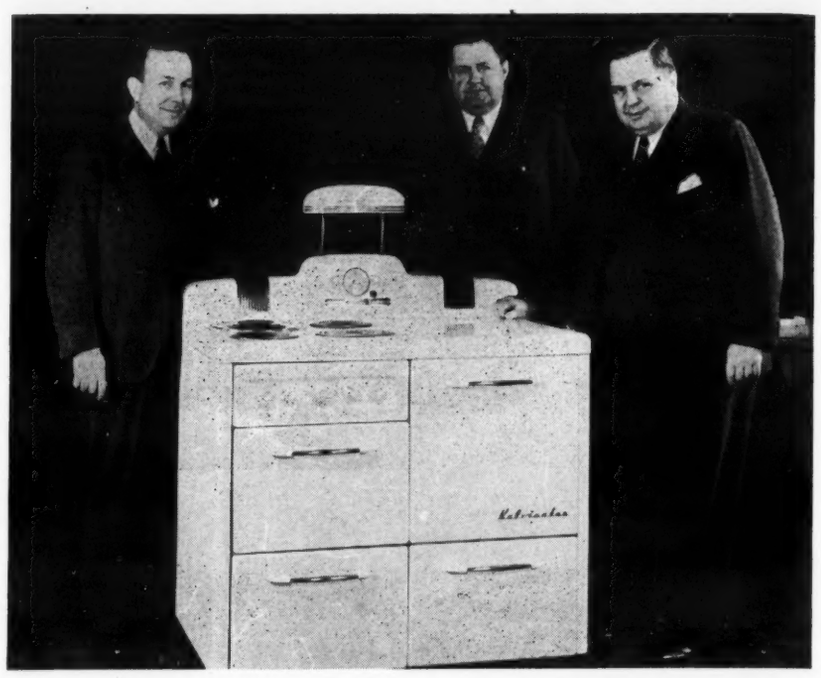
New timer has Selector Switch to provide full automatic control of all units from oven to convenience outlet.

At $179.95 is the ER-49, which has a new type minute minder, with a full 60-minute dial, individual lights which flood the switches when in use, an individual switch, thermostat, and pilot light for the warmer drawer, beneath the switch panel, and provision for a cooking timer as optional equipment.

Foremost in the line is the ER-59, priced at $199.95, a fully automatic model including the automatic timer which controls the Scotch Kettle, oven, and convenience outlet; cooking top light; illuminated surface unit switches; warmer drawer equipped with individual switch, thermostat, and pilot light; and a 60-minute timer with a 10-second buzz instead of the usual single bell stroke.

Provision can be made on this model for conversion into a five-unit range, by installing the Scotch Kettle in the lower right-hand utility drawer and adding another surface unit. Equipped in this manner, the ER-59 retails for $214.95.

Yes Sir, That's Their Baby!



George W. Mason (right), president of Nash-Kelvinator Corp., W. F. Armstrong (center), vice president, and Frank R. Pierce (left), Kelvinator's general sales manager, proudly inspect the new Kelvinator ER-59, top model in the company's range line for 1940.

N. Y. Dealers Appeal For Bar on Group Buying

(Concluded from Page 1, Column 3)

dealer association to consider for action at Albany "a law similar to the Wisconsin law, which would protect business men engaged in retail business."

Sentiment against discount houses is increasing among radio dealers and some distributors, who claimed these places are cutting a larger share of the total radio volume done in the New York area each year. Vicious price cutting situation at present makes it almost impossible for regular retailers to sell radios at a profit, it is said. Drop in retail prices is attributed to the discount houses, where it is claimed, nationally known brands of radios are being merchandised at from 40 to 45% off the regular list prices.

Huey & Blew Head Districts For Detroit Vapor Stove

DETROIT—J. J. Huey and P. W. Blew have been appointed district managers for Detroit Vapor Stove division of Borg-Warner Corp.

Mr. Huey, who for the past 11 years has been associated with the Westinghouse organization in Dallas, Tex., will remain in Dallas and will cover Louisiana, Mississippi, Alabama, Oklahoma, and Texas.

Mr. Blew, previously an appliance buyer at the Fair Store in Chicago, returns to the Detroit Vapor Stove sales staff after an absence of one year. He will headquarter in Lafayette, Ind., and will travel Indiana as well as parts of Illinois, Kentucky, Tennessee, and Missouri.

For Product Cooling . . MARLO UNIT COOLERS

Designed especially for Walk-in Refrigerators, 34 degrees and over, these Units can also be used for Air Conditioning.

The Coil Cores in Marlo Unit Coolers are Headered, and the Tubing proportioned in Circuits that eliminates any short circuiting of the Refrigerants and insures an even Coil temperature.

Housings are made of Aluminum two-piece Castings.

Fan Motor, Fan and Coil Cores are easily removed for inspection if necessary.

All Marlo Unit Coolers are conservatively rated.

Send for Bulletin No. 393 containing complete details.

MARLO COIL CO., 6135 Manchester Ave., St. Louis, Mo.
Canada and British Isles: Universal Cooler Co., Brantford, Ont.
Manufacturers of Complete Line of Low Side Equipment W-2

Kelvinator's New 1940 Program

TAKES CONVENTION BY STORM!

GETS ROUSING RECEPTION. Frank R. Pierce, presiding over the Kelvinator Convention, creates furor with the announcement of a sweeping new Low Price Program that bids to make refrigerator history.

NEWS FLASH: Buzzing telephone and clicking telegraph wires followed Kelvinator's convention announcements as distributors, zone managers and their wholesalesmen relayed the good news of lower prices and better margins to dealers all over the country. From the staid *New York Times* headline story down through thousands of daily papers in every part of America, the news has spread . . . been seen and discussed in millions of homes. As one prominent industry leader said, "*This is the beginning of a new era* in electric refrigeration!"

(TURN PAGE FOR CONTINUATION)

KELVINATOR ORGANIZATION AND DEALERS ENTHUSIASTICALLY ANTICIPATE 1940 SALES INCREASES

Every 24 hours sees interest mounting in Kelvinator's new 1940 Program. Dealers expect sales increases as high as 200%.

"Busy Man"

C. T. Lawson, Sales Manager Household Appliance Division, faces a battery of ringing phones all day, as news about Kelvinator's New Program sweeps through the industry.

THE NEWS IS OUT!

AND ALL OVER AMERICA, dealers are making their plans. Literally, thousands of them are now in touch with Kelvinator.

They're talking about the price reductions of $30 to $60, translating those figures into new business in their communities.

They're planning a *real* attack on the vast low-income market—because, for the first time, they've got the goods to get it! Big 6¼ cubic-foot models of highest Kelvinator quality for as low as $119.95* for Model SS-6!

Everyone who has *seen* the Kelvinator line has unanimously agreed that it is the *finest* in the industry. They look upon the new Moist-Master System models as a real wedge into the big and fast-growing replacement unit market, because they have been designed specifically for that market.

The ideal "step-up" in prices . . . the advertising of prices, including freight, in nation-wide magazine advertising . . . the limiting of dealers . . . every single factor in Kelvinator's startling, New 1940 Program has been enthusiastically O.K'd.

To everyone's surprise, this entire program has been accomplished without reduction in dealers' retail margins . . . and without any sacrifice in the high quality for which Kelvinator has always been famous.

How was it done?

Kelvinator officials have given the answer: a broad-gauge program, based on years of study, accompanied by sweeping changes in policy.

1. Concentration of 96% of production on the big 6 cubic-foot models, and larger (the size people really need)—permitted a lowering in price.

2. In anticipation of greatly increased sales, Kelvinator *doubled* production schedules and passed the manufacturing savings on.

3. Kelvinator has *cut the cost of selling.* And in addition, cut the manufacturing profit per unit.

• • •

It's revolutionary—yes. Radical? Yes—but everyone who has seen the whole program agrees it's the answer to the dealers' problems.

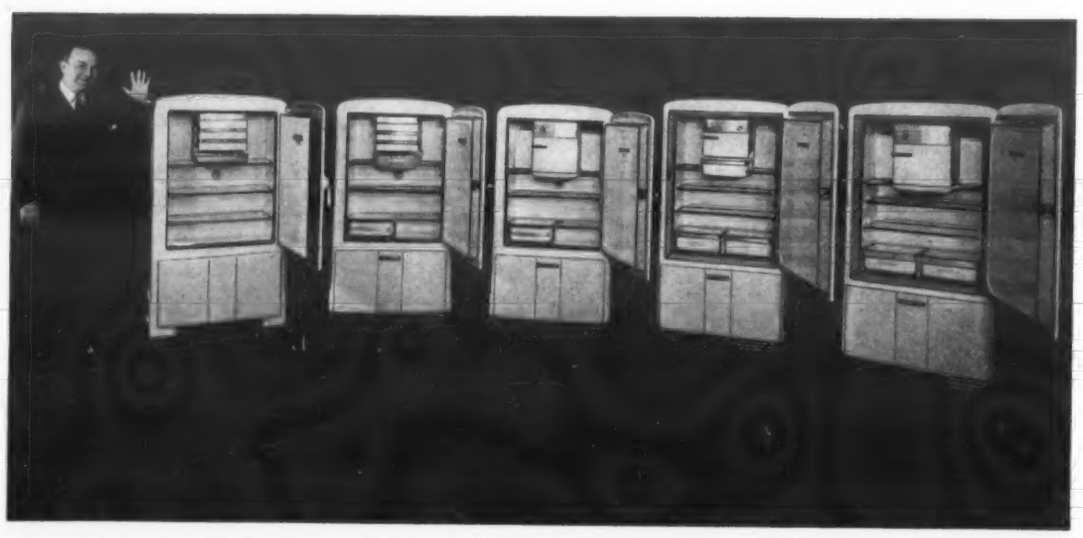
Naturally, it will be limited to a certain number of dealers in each locality. For your own protection, find out *fast.* Write or wire your nearest distributor or factory branch, or direct to the sales department.

KELVINATOR DIVISION
NASH-KELVINATOR CORP., DETROIT, MICH.

**Prices suggested are for delivery in the kitchen with 5 Year Protection Plan. State and local taxes are extra. Prices are slightly higher west of the Rockies.*

"Can't Miss"—say Seasoned Veterans

"The good old days are coming back again," says Mr. Steinert, Boston Kelvinator distributor, in a double-barrelled handshake with Mr. Cron (*left*) and Mr. Maloney (*right*). • "Those prices are the answer to a dealer's prayer," answers Mr. Cron, "and the quotas are a cinch." • "Looks like the first real program the industry has had that will really stabilize dealer prices and profits," says Mr. Maloney.



"IT'S QUINTUPLETS!"—*says Pierce.* There are five big Kelvinator "sixes" for 1940. Complete price coverage in the ideal size, to meet America's demand for a bigger, finer refrigerator at a lower price. "And that's not all", says Pierce. "Look at the easy step-ups . . . feature by feature . . . from that sensational low-priced SS-6 at $119.95* to the "Moist-Master" HD-6 for $209.95*"! Three big 8's, priced at $189.95*, $209.95* and $239.95* round out the 1940 Kelvinator household line.

"LOOK THREE TIMES"—*says Stuart.* J. Nelson Stuart, Kelvinator Advertising Director, presenting Kelvinator's 1940 challenge. "Look at the Size! Look at the Name! Look at the Price!"—a battle-cry which will be spread throughout America in mammoth-sized newspaper ads. • Full magazine spreads in color, billboards and local radio programs will carry the good news about "a finer, better refrigerator at a lower price" to America's buying millions in 1940.

And Still the Food Rolls out!

• The millions of "pioneer" families, who have outgrown their small, old refrigerators of years ago, will be interested in this picture; and the dealers who sell Kelvinators in 1940 are going to make hay by selling those people a refrigerator that's BIG enough to meet their "grown-up" needs.

This picture dramatically shows the capacity of Kelvinator's lowest-priced "big-six" model SS-6, for only $119.95.* The lady has just finished unloading it.

This year, Kelvinator concentrated more than 96% of its factory production on 6 cu. ft. models and larger.

This Big Animated Window Display Gets Those Customers To Look 3 Times!

BIG AND BEAUTIFUL— this is the new giant spectacular for Kelvinator dealers showroom, windows and floors. That drum on top revolves, for animation, carrying that Kelvinator selling slogan—"Look at the Size . . . look at the Name . . . Look at the Price!" Note the display on the free book offer, too!

He's Got Something There!

PRESENTING THE "BEAUTIES"— H. M. Parsons, Electric Range Sales Manager, gets a big ovation when the spotlight falls on the biggest and finest range line ever introduced in all Kelvinator history.

"NEWEST RANGE IN WORLD" PROVES SALES SENSATION

THEY CAME—they looked—they whistled in surprise when Kelvinator's Electric Range line was unveiled.

They checked features . . . looked for all the strong selling points, and found that Kelvinator not only had them all, but plenty of exclusives to boot!

Here was the *newest* Electric Range line in the world! Not just last year's line re-styled, and a feature or two added—but absolutely *new* from its welded, one-piece construction, to the new Automatic Computing Timer!

They cheered the announcement that Kelvinator had deliberately set out for leadership by building more value, more features, into an electric range than buyers would find elsewhere.

They cheered the new oven with its *two* high-wattage heating units, for record-fast pre-heating time.

They liked Kelvinator's new-type cooking Timer that eliminates "counting back" to figure out correct setting. They O. K'd. the new Selector Switch which controls the oven, appliance outlet and the Scotch Kettle.

The Kelvinator Chromalux units with *five* speeds . . . the recessed floodlighted panel . . . the optional drawer location of the Scotch Kettle — all met with enthusiastic approval.

And when they heard the prices, there was more cheering. For here was really the key to the vast and growing electric range market.

But wait 'til you see the facts yourself! See your distributor or factory branch today.

EVERY 1940 KELVINATOR HOUSEHOLD RANGE HAS THESE IMPORTANT FEATURES

5-Speed Kelvinator Chromalux Surface Units • Oversize two-unit oven • Porcelain enamel on steel cabinet, inside and out • One-piece welded body construction • 5-Heat bi-rotary, silver contact surface unit switches • "Broil" and "Bake" Pilot Lights • Recessed, slanting switch panel • Combination porcelain enamel broiling pan with non-tip grille • 6-quart Scotch Kettle • Combination oven switch and thermostat with pre-heat cut-off • Heat-seal, counterbalanced shelf-type oven door with broil stop.

SHE PROVES THE POINT—Polly Gade, Kelvinator Home Economist, shows how six pans of bread are a cinch for that over-size Kelvinator oven. The Automatic Light in Kelvinator's Range is another woman-winning feature.

KELVINATOR'S NEW WASHERS FOR 1940 GET ROUSING "OKAY!"

New 5-Star Program on a 5-Star Line Gets a 5-Star Rating

LAST SUMMER dealers told us—"Don't change it." Our 1939 Washer line couldn't be improved on; it was already the best in the industry.

They said "that Fin-Flex agitator is still the fastest, cleanest washing mechanism ever put in a tub."

They said "others are still years behind Kelvinator's Fabric-Saver Wringer with the Pressure-Pilot."

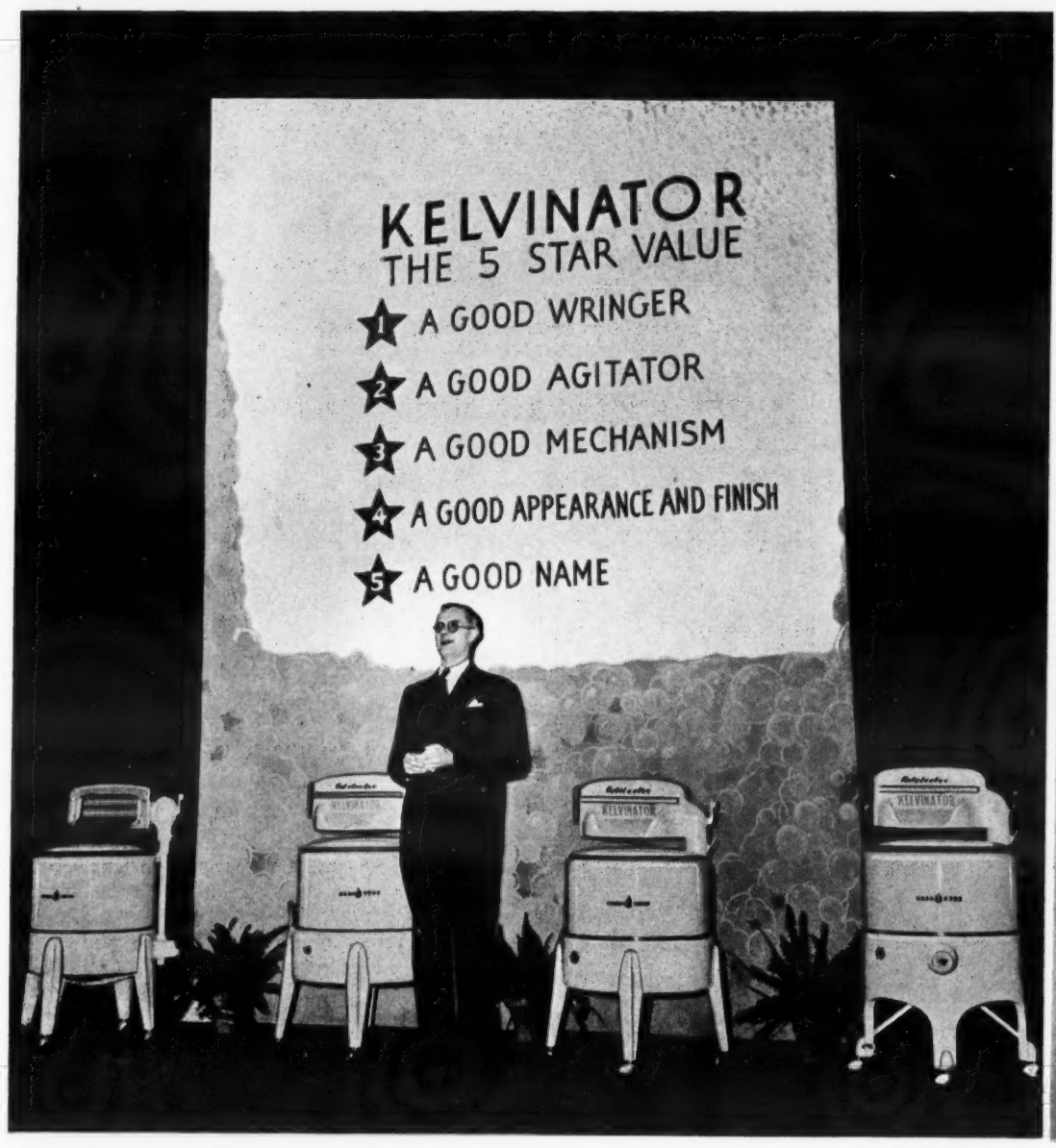
But they looked at Kelvinator's new 1940 line—and cheered! All the fine features had been retained, and improved upon.

In addition, they saw models with tubs that were *bigger* . . . new fittings that made the industry's best *look* the part.

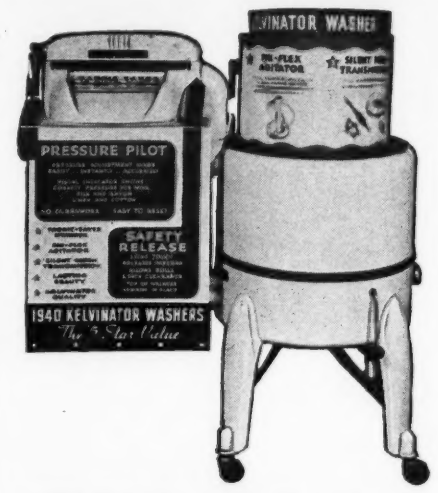
They spied the Automatic Timer . . . tried it . . . saw how it could be set to turn off the washer automatically. Hailed it as a big plus in replacement selling.

They liked the step-up in price . . . the full line of Kelvinator Ironers that accompanied the washers.

But you should see for yourself the line that's set hundreds of Kelvinator Laundry Equipment dealers to cheering. Ask your distributor or factory branch manager for the full facts. Do it today!



REMOVING THE MYSTERY—Mr. R. W. Poirsons, Washing Machine Sales Manager, says the reason for Kelvinator's rise in sales is easy to understand. There are five things that count—and in every one of them, Kelvinator *leads*—with definite superiorities that can be easily proved. As a result step-up selling is made easier.



NEW SELLING DISPLAY with revolving drum on the tub for Kelvinator's new Washer line. It tells the whole story in color, and in a flash without consuming additional floor space. And what a story of superiority it has to relate!

IT'S A 5-STAR VALUE

★ ★ ★ ★ ★

★ Fabric-Saver Wringer, balloon type rolls, 4 coil springs. Pressure Pilot shows correct settings for all fabrics. Extra safe with instant action, bar-type pressure release. Has full Underwriters' Laboratory approval.

★ New, improved Fin-Flex Agitator of nickel-chrome protected aluminum . . . cleanest-washing, *gentlest* type designed.

★ Silent-mesh transmission . . . only 5 moving parts . . . oil supply sealed-in . . . so quiet you can't hear it run.

★ Rigid construction, one-piece base. White durable, baked Permalux finish.

★ Tub is gleaming white Porcelain Enamel, inside and out. 10 lb. washing load.

★ Automatic timer shows recommended time for washing various materials. Stops machine at predetermined setting.

★ Large rubber wheels . . . locking-type Casters . . . foot-control Clutch.

Cooperative Refrigerator Proves Value To 15-Family Community

DUCK SPRINGS, Ala.—A cooperative refrigerator is proving its value for 15 families in this community which like many others in the South is not large enough for profitable operation of a commercial locker plant. It has been in operation more than a year.

The cooler, which is used for curing meats and storing perishable fruits and vegetables, is located in the yard of Mark Smith's home and managed by him.

More than fifty patrons have used the facilities of the cooler, storing more than 25,000 lbs. of meat and vegetables. The cost charged for the service is 1 cent a pound per month.

Out of the money taken in for service charges, about 50% was paid out for electricity leaving the remainder as an operating profit.

The manager of the cooler receives for his services the electricity used on his farm and in his home, the use of the refrigerator without charge, and is allowed to charge each patron fees for processing meat if the patron desires to have this work done for him.

Commenting on the successful operation of the cooler, John Liles, Jr., extension economist of the Alabama Polytechnic Institute at Auburn, who has been a consultant for many groups in the state interested in community refrigeration service, said:

"In-so-far as a 'live-at-home' program is concerned, this type of community enterprise offers many advantages to neighborhoods which need refrigeration for storing home produced foods and to make possible year-around curing of pork. Such units can potentially serve a large percentage of Alabama farm families, since units of this type can be located in areas where commercial plants would not be profitable.

"It should be understood, however, that units of this type do not provide quick-freeze facilities, although it is possible that in some cases it will be practical to add a quick-freeze room or to use a commercial quick-freeze plant in town as a supplement.

"Community refrigerators like the one operated at Duck Springs can, in addition to making possible a more economical and better family food supply, serve as concentration points for milk, cream, and other perishable produce en route to market and will enable farm families to obtain better prices and higher quality products."

Seeger Full-Vision Cases Have Blower

ST. PAUL—Two new series of display cases have been added to Seeger Refrigerator Co.'s line for 1940, and several refinements have been added to some of the models in the commercial cabinet series.

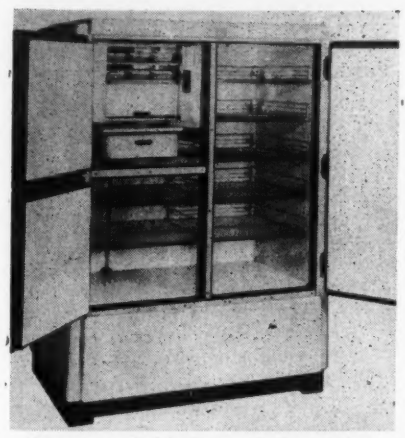
Seeger's Series 24 and 25 display cases, introduced last year, have been continued in the 1940 line, with improvements in lighting and porcelain mezzanine shelves.

New addition to the display case line are the Series 28 and 280, full-vision cases employing the feature of air circulation by means of a fan in one end of the cabinet.

Models in the "air conditioned" commercial cabinet line have been restyled, and are available in two, three, and four-door types to suit various usage requirements. Air circulation in these models is accomplished by means of a fan built into the rear cabinet wall of one compartment. Some models also are available with glass doors.

Two models equipped with ice-making coils also have been added to the "D" series of reach-in refrigerators. Seeger's so-called "Top Bunker" line, equipped with coils, also has been carried over.

G-E 1940 Additions



Storage Cabinet and Icemaker

Dairy Merchandiser

Michigan Refrigeration Has New Quarters

DETROIT—Michigan Refrigeration & Equipment Co., Inc., dealer in Westinghouse household refrigerators and distributor for Westinghouse commercial refrigeration in Detroit and parts of Michigan, has moved from 464 W. Canfield to new quarters at 4433 Cass Ave. in Detroit.

The company handles Gloekler, Puffer-Hubbard, Jewett, and other lines in addition to a full line of Westinghouse products.

The firm recently sold a 250-locker storage plant installed at Yale, Mich. John P. Weber is president of the firm, and Roy G. Grant, formerly with General Electric Co. in Michigan, is vice president.

Masseritz Heads Detroit G-E Commercial Activity

DETROIT—Bernard D. Masseritz has been appointed district manager for General Electric automatic heating, air conditioning, and commercial refrigeration products in the Detroit area. In this post, he becomes responsible for all G-E air conditioning and commercial refrigeration sales in Michigan.

G-E Commercial Refrigeration Men To Write Papers For Cash on Their Pet Sales Methods

BRIDGEPORT, Conn. — Another major General Electric product division, the air conditioning and commercial refrigeration department at Bloomfield, N. J., has decided to take a second and longer look at its best retail salesmen, combining the regards for outstanding sales achievements with an analysis of how the job was done.

To that end Glenn Gundell, advertising manager and director of sales training, has announced the establishment of the "G-E Chair of Contemporary Salesmanship." It is designed as no empty academic honor, but a means for making available for study the methods used by leading salesmen in the field.

All retail salesmen of G-E air conditioning and commercial refrigeration products will be eligible for the chair, under the plan, and from a list of nominees from the field a central committee will periodically select those to be honored.

In return for a cash honorarium, each holder of the fellowship will prepare a paper on the product and sales methods in which he excelled. These papers will form an important part of the department's sales training activities. If accomplishments warrant it, more than one man may be named to the chair simultaneously.

"We can always shove over and make room for good salesmen," Mr. Gundell says. "The Chair of Contemporary Salesmanship is being established for two purposes. It will give formal recognition to the man who does a distinguished job of selling, and it will stimulate an exchange of useful selling practices.

"To accomplish this latter purpose, the occupants of the chair will prepare papers which will be studied and then published as part of our regular sales training courses. Nothing is as convincing as success. The fundamentals of successful selling have been pretty well established. But the application of these fundamentals varies widely.

"We do not believe that all should copy the methods of the supersalesman, but we believe every one can learn valuable lessons from studying the various procedures used by the outstanding retail representatives of this department."

Fogel's Dealers Meet, Hear 1940 Plans

PHILADELPHIA—More than 100 key dealers from Fogel Refrigerator Co.'s eastern territory gathered Jan. 27 at the Fogel plant and at the Broadwood hotel here for the company's "1940 Sales Session."

Main event of the convention was the sales dinner at the Broadwood hotel.

Following the banquet, John T. Dawson, Fogel's eastern sales manager, introduced President William Fogel, who told of the firm's progress during 1939 and outlined its ambitious plans for the current year. He also mentioned the company's newly opened factory annex which increases its manufacturing space by 50%.

Morning of the meeting day was devoted to factory tours, inspection of exhibits, and conferences.

The new Fogel finance plans were described by Harry Fogel, the company's treasurer. Leon Greenberg, office manager, discussed various innovations which have been made in the interest of increased efficiency. Edward K. Baker, head of Fogel advertising and sales promotion, talked on this phase of the company's plans.

Following the formal program, various members of the Fogel field staff spoke extemporaneously.

Introduction of the 1940 Fogel line revealed display case models in stock sizes ranging from 4 to 20 feet in length, and a new line of reach-in refrigerators (with capacities ranging from 25 to 65 cu. ft.) for either remote or self-contained applications.

Kelvinator Establishes Omaha Headquarters

OMAHA, Neb.—New merchandising plans on Kelvinator household appliances were announced at a recent three-day showing at the Fontenelle hotel. Local warehouse and service departments will be maintained by Kelvinator at the Ford warehouse.

More than 200 dealers attended the showing, which was conducted by Don Keller, Kansas City zone manager for the company; H. C. Doss, sales and advertising manager; and Jack Leighner, district sales manager, who will be in charge of the Nebrask and western Iowa territory.

Dawson Joins Fogel In Ottenheimer's Post

PHILADELPHIA—Elbert R. Ottenheimer is no longer associated with Fogel Refrigerator Co., officials of the company announce. His duties are being taken over by John T. Dawson.

N. Y. Opera House May Get Air Cooling

NEW YORK CITY—Air conditioning the Metropolitan Opera House here for year-around use as a center of community activities is included among the improvements contemplated by the plan for the Metropolitan Opera Association to purchase the Opera House for $1,970,000.

"LET'S GET DOWN TO CASES"

★ Enthusiasm FROM THE USER!
★ Cheers FROM THE DEALER!
★ Applause FROM THE INDUSTRY!

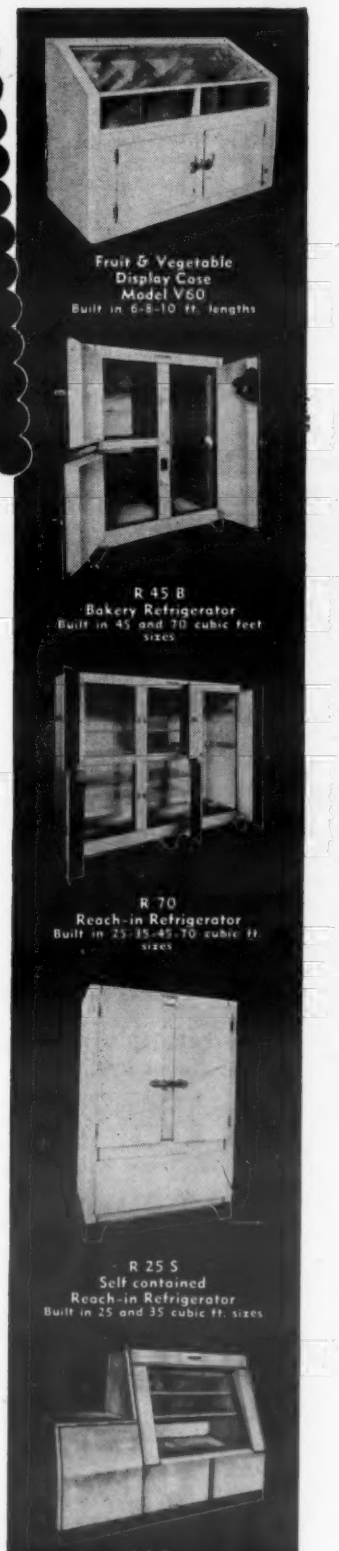
HAVE GREETED

The McCALL Line of "3 Steel Cases in One"

COMMERCIAL REFRIGERATORS

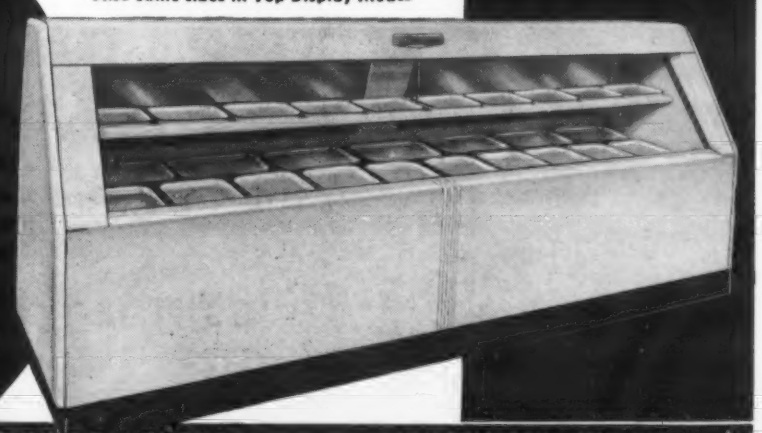
Because
★ From coast to coast thousands of McCall owners voluntarily testify to trouble-free performance after years of operation.
★ McCall *looks* quality—*is* quality—*commands* a quality price. Yet its low cost to the dealer permits legitimate mark ups—assures handsome profits.
★ McCall's policy of fair dealing and true standardization has won the respect and confidence of the entire refrigeration world.

The familiar slogan "Let's Get Down to Cases" has blazed a trail in the nation's refrigerator markets. McCall has brought to the industry a new, true, "down to earth" conception of maker — dealer — user cooperation. McCall's outstanding success and present day dominance are proof positive of the soundness of its operating plan – reason indeed for your immediate request for exclusive franchise details.


Fruit & Vegetable Display Case Model V60
Built in 6-8-10 ft. lengths
R 45 B
Bakery Refrigerator
Built in 45 and 70 cubic feet sizes
R 70
Reach-in Refrigerator
Built in 25-35-45-70 cubic ft. sizes
R 25 S
Self contained Reach-in Refrigerator
Built in 25 and 35 cubic ft. sizes
4 S D
Self contained 3-shelf Display Case
Built in 4-6-8-10 ft. sizes

McCALL Welded All Steel REFRIGERATORS

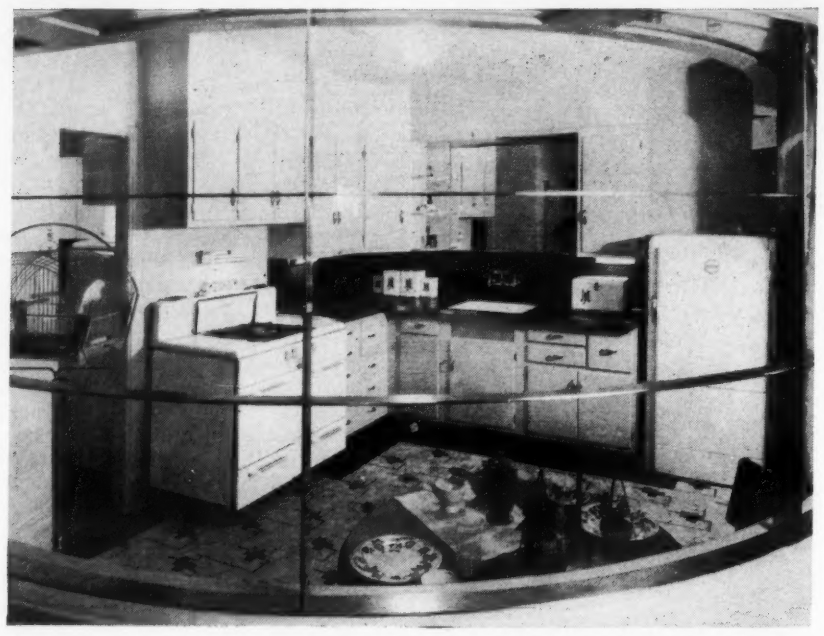
C 10 DM
Double Duty Display Case
Built in 6-8-10-12-14-16 ft. sizes
Also same sizes in Top Display Model



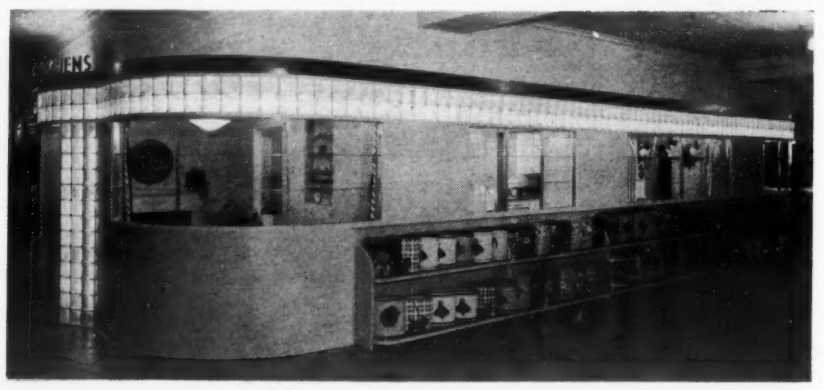
★ Mc CALL REFRIGERATOR CORPORATION HUDSON, N. Y. ★

FACTORY BRANCH OFFICES IN BOSTON • NEW YORK CITY • CHICAGO • EXPORT OFFICE AT 111 8th AVE., NEW YORK

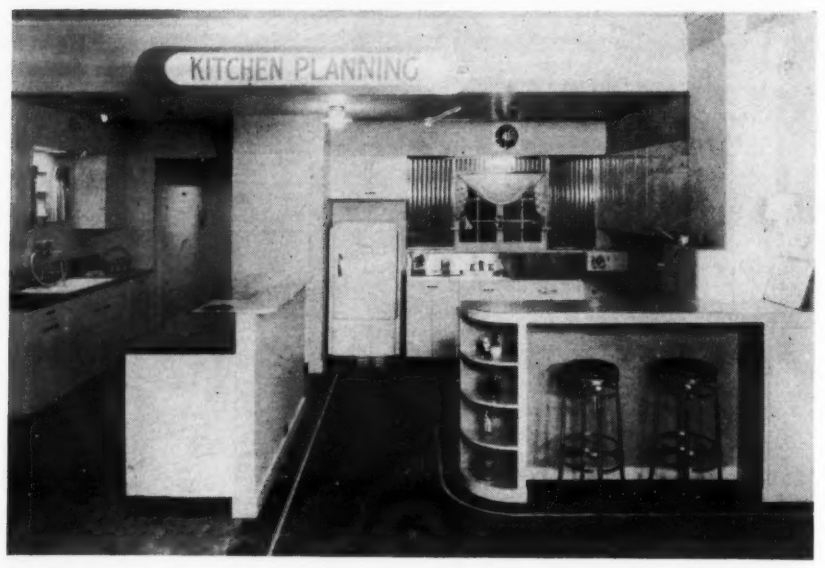
Kitchen-Planning In a Big Way



A corner of one of the model kitchens in the appliance department display of J. L. Hudson Co., Detroit. Completely equipped and well lighted, the kitchen is easily visible from the sales floor through a curved glass window and is a "traffic-stopper" for the kitchen planning department.



View of the exterior of the three new model kitchens at the Hudson store. Topped by a border of lighted glass brick with attractive entrance, the three kitchens are inter-connected to allow prospects to "shop" for a model kitchen.



Kitchen planning department at the store. Behind the display is an office and drafting room where plans are drawn up for the planned kitchens. Here an architect takes preliminary sketches and specifications from a salesman and draws up complete working plans for the kitchens.

Proper Equipment & Trained Personnel First Needs of Kitchen-Planning Dept.

Hudson's Tries Kitchen-Designing on Big Scale

By Robert M. Price

DETROIT — Kitchen planning is now on a "tailor-made" basis at the J. L. Hudson department store here, with the opening of a separate kitchen planning department on the tenth floor to make available to store customers a service that includes every phase of modern kitchen planning from original work sketch to final installation.

The new department was established as the result of a heightened interest in modern kitchens which was built up by the electrical industry in the last few years, according to James B. Ogden, manager of the electrical department at Hudson's.

Before launching the new venture, Mr. Ogden said, it was necessary to establish a trained organization, one that could clean up every problem of design and installation. Actual "selling" of planned kitchens was another knotty problem for a department store.

A LADY ARCHITECT — —

Taking care of the actual design of the kitchens is Miss Jean Steere, a registered architect. Especially trained to design "last word" modern kitchens, Miss Steere lays out all the plans for the kitchens and also works out color combinations for customers. She works with the customer's suggestions, aiming to develop a plan that will meet with the customer's approval as well as with all the demands of efficient design.

To facilitate this planning work, the department has a drafting room adjoining Miss Steere's office. Here preliminary plans are drawn up into the final working sketch.

— — SALESMEN WHO SKETCH

Selling the idea of planned kitchens presents special problems for a department store, says Mr. Ogden. To interest and sell prospects a salesman has been hired to follow leads. This salesman has a knowledge of building materials and costs. He also is able to draw a preliminary sketch of a prospect's kitchen so that a more detailed plan with estimated costs can be presented to the prospect, without necessitating a special call by the architect.

When the more detailed sketch is presented to the prospect it includes installation costs, giving the salesman a more effective talking point.

When the salesman gets the "go ahead" from the prospect, a blueprint is drawn up. Before the material as specified is ordered, the shelf and cabinet space is rechecked to make sure of a perfect fit.

But getting the interest of the store's many customers is the main job. Most of the leads are obtained right on the floor. The planning department itself has an attractive planned kitchen that is designed as an eye-catcher for these prospects. Situated in the major appliance department, prospects are attracted to the display and there are told the store's facilities for designing a kitchen "just like this one." The salesman, of course, follows up leads of the most interested prospects.

— — HOME ADVISORY BUREAU

Near the kitchen planning department is the model kitchen of the home advisory bureau. Regular cooking schools are held here, and demonstrators instruct the housewife in the ease and economy of modern cooking, emphasizing the advantages of modern kitchen design. This original interest often leads to the kitchen planning department.

At another location on this same floor are three new modern kitchens which aid in getting leads for the planning department. These kitchens are designed with wide glass windows, and have a lighted glass brick trim. Main idea of this display is to show the place a modern kitchen can assume in the home. Features of this display include a breakfast nook with a fireplace, and a kitchen "office."

— — SALES BY THE PIECE

It isn't difficult to get a woman interested once she has seen the kitchen, says Mr. Ogden. Big bugaboo up to this time has been price, he says, but prices on cabinets and electric dishwashers are coming down, and he believes the market for complete kitchens will be greatly increased. Also, Mr. Ogden says, kitchens can be sold progressively. Plans can be drawn up so that the customer can add the appliances and fixtures from time to time, breaking up the cost to the point where planned kitchens can be sold to many more people.

Interesting fact is that the store's kitchen planning service has not yet been advertised in newspapers. Up to this time the leads from store traffic and the missionary work of the salesman have been found to be adequate. However, literature on the service is readily available at the store, and it has been found that prospects have a higher interest when contacted in this way.

— — EXHIBITS AT SHOWS

Builders shows and home expositions have been found to be valuable in getting leads. The planning department designed and installed the modern kitchen at the current show, and this kitchen is an exhibition in the permanent home display in Detroit.

The kitchen planning department assumed a major role in the month-long housewares show which was conducted at Hudson's during January. On the directory of exhibits, visitors were invited to visit the modern kitchens on display, and it is expected that the housewives' "oh's and ah's" on seeing the displays will be turned into a "yes" on a modern planned kitchen.

Handles Kelvinator Line

DONALDSONVILLE, La.—Matassa Electrical & Furniture Store has been opened here under management of Joseph Matassa. The firm is carrying Kelvinator appliances.

S. J. McCarthy Heads Up New Kitchen-Planning Department of Norge

DETROIT — A new kitchen-planning and apartment house department has been established by Norge division of Borg-Warner Corp., announces J. A. Sterling, general merchandise manager.

"The establishment of this new department is made necessary by the growing volume of Norge business in the apartment house field and also because of the large number of Norge products being installed in low-rent housing projects," stated Mr. Sterling.

In charge of this new department will be S. J. McCarthy, for the past 10 years manager of a similar department in the west-central district for Westinghouse Electric & Mfg. Co.

Prior to his Westinghouse connection Mr. McCarthy was for two years with the Michigan distributor of the Peerless Ice Machine Co. He started in the refrigeration industry in 1926 with General Necessities Corp.

Salesmen Can Deliver When Sale Is Made

HARRISBURG, Pa. — Using 10 light trucks on which appliances are carried for immediate delivery by salesmen, Gable's Hardware Store has been able to roll up a sales total of 2,000 appliances during the past year, of which 1,200 units were electric washers.

Salesmen find it much easier to close a sale when they are able to offer to leave the appliance at the home after a demonstration, instead of offering to deliver an appliance later, says J. A. Dietrich, sales manager.

Salesmen covering rural areas where homes do not have electric power lines available carry a demonstration unit of a 250-watt electric light plant. These small units are set up, with electric lights placed in several rooms. Salesmen have been averaging one sale to every three demonstrations.

Home Laundry 1939 Sales Gain 24%

CHICAGO—Home laundering appliances shipped in 1939 aggregated 1,548,480 units, an increase of 24.04% over the total of 1,248,154 units attained in 1938, according to figures reported by American Washer & Ironer Manufacturers' Association.

Washer shipments totaled 1,433,256, an increase of 25.99% over the 1938 figure of 1,137,614. Shipments of ironers totaled 115,224, a 4.24% gain over the 110,540 units shipped in 1938.

Washers shipped in December totaled 77,270, an increase of 14.47% over the 67,502 shipments made in the same month of 1938. Ironer shipments for December totaled 11,854, a mark 28.71% above 1938.

Conditionaire of Detroit To Sell Philco Boxes

DETROIT—Conditionaire, Inc. has recently been appointed distributor of Philco refrigerators in Detroit, concentrating on the building trades. The firm also handles Philco-York cooling equipment. Perry Greenberg is in charge of the Philco household refrigeration division.

Tests that assure the dependable, trouble-free performance of CURTIS Condensing Units

Testing castings for leaks

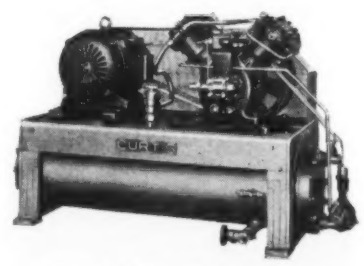
Testing assembled compressors

Inspecting for Leaks— in castings—in assembled compressors

● Every Curtis casting is carefully checked for possible leaks **before** it is incorporated in the Curtis unit. Castings are put under air pressure and tested under water. Because Curtis operates its own foundry, no attempt is ever made to plug casting leaks, or to seal them by galvanizing and other methods. Such castings are rejected and melted down.

In addition, the compressors completely assembled, are again pressure tested under water as a final check for any possible leaks that might have developed during machining, finishing and assembling.

Tests such as these are only two of many examples of the care and precision of Curtis manufacturing methods. All contribute to the high efficiency, trouble-free performance and exceptionally long life of every Curtis Condensing Unit.



Curtis 15 H.P. Shell and Tube Condensing Unit. Also sizes up to 30 H.P.

Curtis Refrigerating Machine Company
1912 Kienlen Avenue, St. Louis, Missouri

CURTIS REFRIGERATION AIR CONDITIONING COMMERCIAL

Division of Curtis Manufacturing Company

Don't Experiment!

TRUST EXPERIENCE

Rempe's engineering staff is never satisfied with just furnishing the finest unit coolers you can buy. We follow through with a wealth of data and information that helps you MAKE SURE they get you the results you want. REMPE CO., 340 N. Sacramento Blvd., Chicago.

PIPE and FIN COILS

REMPE KNOWS! ask REMPE

SEE G-E! AND YOU'LL SEE THE DIFFERENCE!

Prices Go Even Lower For 1940, Too!

THE REFRIGERATOR WITH CONDITIONED AIR

G-E WILL DO IT AGAIN THIS YEAR

See G-E and you'll see the difference! Any side by side comparison with any refrigerator — value for value, styling for styling, feature for feature, mechanism vs. mechanism—*any* way you look at it you'll see why the General Electric Refrigerator will pace the field again in 1940. And prices are even lower than '39.

The new 1940 G-E — the refrigerator with *Conditioned Air* — is already a news sensation from coast to coast. Watch it go!

GENERAL ELECTRIC COMPANY
APPLIANCE AND MERCHANDISE DEPT.
BRIDGEPORT, CONNECTICUT

★ ★ ★

A FULL Line of electric appliances for the home — G-E Electric Ranges, Electric Sink (with Dishwasher and Garbage Disposall), Water Heaters, Washers, Ironers, Cleaners, Radios, Sun Lamps, Clocks, Fans, Small Appliances — backed by the combined research, engineering skill and manufacturing experience of the world's oldest and largest electrical manufacturing company.

GENERAL ELECTRIC

Month-By-Month Summary of San Diego Appliance Bureau's 1939 Co-op Activities Shows Sales Results Totaling $3,500,000

SAN DIEGO, Calif.—Concrete advantages of the cooperative work of an electrical association to manufacturers, distributors, and dealers, was evidenced in the 1939 log of activities of the Bureau of Radio & Electrical Appliances of San Diego County, a program which produced a $3,500,000 retail value for appliances sold in San Diego county during the year. Sales in almost every appliance line were up over the previous year.

Organized in 1933 to stimulate the sale and use of all electrical appliances and to work for the general betterment of the electrical industry, the bureau reports that all its members joined hands to carry out its purposes. The San Diego Consolidated Gas & Electric Co. has offered financial cooperation in making available an advertising budget, and members of the bureau's board of directors have attempted to direct the available funds into campaigns and promotions designed to increase appliance sales all along the line.

MONTHLY ACTIVITIES

A month-by-month report of the bureau's activities in 1939 serves to bring out highlights of the well-organized and productive campaign.

In January a portable electric heater campaign was launched, using space in city and county newspapers to start the sales rolling in. A "television" committee, an activity carried over from the previous fall, began to combat damaging news items on television that were said to be hurting radio sales.

Promotion of table appliances was the big gun in February, and 12 60-inch advertisements appeared in local papers. Easel window cards were provided for all dealers to push the sale of mixers, waffle irons, toasters, roasters, coffeemakers, and like appliances.

The bureau jointly sponsored an "All Industry Forum," an inspirational meeting designed to create additional confidence in the electrical industry. Some 250 turned out to hear Dr. Woellner, principal speaker.

The television committee arranged a luncheon meeting with local newspaper officials to discuss the "threat" of television, which resulted in the editors agreeing to withhold publication of unfavorable publicity, and to print constructive material furnished by the committee.

In March the washer and ironer campaign was unveiled, using nine 80-inch advertisements in local and county publications.

From April 25 to 30 the third annual Spring Fair was staged. The combined show of electrical and gas appliances emphasizing home modernization brought out a 65,000 attendance. Buying interest exhibited at the show was said to make it the most successful ever held.

REFRIGERATION IN MAY

Refrigeration activity began in May with a series of "savings" advertisements, backed by a string of street car card layouts. A "Refrigeration Discussion Forum" was said to have drawn a big attendance of dealers and distributors to discuss the possibilities of eliminating objectionable trade selling practices. A committee was selected to draft a trade practice code of ethics.

In June the refrigeration advertising was continued with an "88 cents cost of operation" theme. Local papers carried 12 75-inch advertisements, and the street car cards were continued. This copy really "clicked," it was reported.

The trade practice committee called a general meeting to present suggested code, and was enthusiastically received by dealers and distributors who voted to put the code in operation at once. Because of elements having to do with price control, the program was not officially sponsored by the bureau, but was supported as a constructive and workable plan.

July saw the "88 cent" refrigeration theme continued with nine 75-inch inserts in local papers. Electric cookery was promoted in county publications, and a radio program, "Leisure House," was sponsored as a three-times-weekly feature by the bureau. The program sold to the public the idea of more and better electrical appliances.

In August the bureau compiled and printed 10,000 copies of a refrigeration recipe book. Backed by newspaper advertisements and radio announcements, the booklets went into a second 10,000 printing. The books were given out at dealers' stores throughout the country. "Leisure House" program was continued throughout August.

Annual election of officers installed Elmer B. Hazie as president, replacing Glenn H. Dutton, retiring president.

September featured a revival of the "Two Radios for the Price of One" campaign to reduce trade-ins and speed the sale of console and combination models. Newspaper and radio tie-in advertising was used for promotion.

The annual banquet, with educational and inspirational features, took place on Aug. 19.

The "Two Radios" campaign was continued in October and considerable success was reported in encouraging buyers to keep their old radios. A radio log and highlights booklets was introduced with accompanying advertising and promotion. Public demand ran the original 10,000 printing to 40,000.

110,000 AT SHOW

High spot of the November-December activities was the seventh annual electrical show which drew 110,000 to see the latest things electrical. Exhibitors reported that a fine buying interest was evidenced. Christmas buying following the show broke all previous records for San Diego. Supplementing the large volume of show advertising was an outdoor poster which went up immediately following the show. Theme of the 75 six-sheet posters was the message of "Wise Men Buying Things Electrical."

Special copy was furnished newspapers in running holiday section stories on all types of appliances.

Results of the year's activities were shown in the sales increases among the different appliances. Refrigeration sales, which were reported good in 1938, were said to be well ahead of that figure for 1939. Washer sales were more than any previous year, although ironer sales were down. Most types of table appliances established new volume records, it is said.

Radio sales were up to an all-time high, and vacuum cleaner sales also had a peak year.

Adding up the gains in almost all appliances produced the $3,500,000 retail value of all appliances sold in San Diego county in 1939.

The bureau's plans for 1940 call for increased activity along all lines, and promotions and campaigns for the year will be made available to assist dealers in topping their records of 1939, according to the announcement by J. Clark Chamberlain, secretary-manager of the Bureau of Radio & Electrical Appliances of San Diego County.

Union Electric Has New G-E Model Kitchen

EAST ST. LOUIS, Ill.—A new General Electric model kitchen was opened here recently by A. J. Crivello, sales manager of Union Electric Co. of Illinois, to launch a 1940 campaign on planned kitchens. Some 200 women visited the air conditioned auditorium of the company on opening day.

Two home economists, Dorothy Roodhouse and Mary Mueller, will be on duty at the model kitchen to give bi-monthly cooking demonstrations.

Leighner Moves From K. C. To Omaha For Kelvinator

OMAHA, Neb.—Jack Leighner, formerly with Kelvinator in Kansas City, has been appointed district manager in this area with headquarters in Omaha.

A DYNAMIC 1940 LINE
SENSATIONAL 'KIT PLAN'
DIRECT-TO-DEALER POLICY

Make it easy and profitable for you to GET

Gale is built to SELL. Styled ahead of the trend, built to out-perform, kitchen-designed for greatest utility and convenience!

And more! Gale offers dealers direct-from-factory advantages plus the sensational merchandising plan that solves dealers' problems—the Gale "Kit Plan".

No restriction on ANY Gale models—you sell whatever YOUR prospects prefer—and you get FULL MARGIN on EVERY Gale.

Features—beauty—performance — economy — utility. Gale has them all! You can PROVE the extra value of the Gale! Just look at the load the Gale 6-ft. economically, efficiently cools, by actual test. Designed for UTILITY.

GALE 'MECHANICAL ICEBERG' UNITS plus the exclusive new Gale Equalizer give you a powerful new sales presentation on efficiency and economy. Conventional or hermetically sealed 'Mechanical Iceberg' super-power units are available.

The 1940 GALE De Luxe 6

GALE PRODUCTS
Division of Outboard, Marine & Manufacturing Co.
GALESBURG, ILLINOIS
In Canada: GALE Products, Peterboro, Ontario

Norge Wholesale Men Go To Product School—'Profs' Average Grades At 80%

DETROIT—An average grade of 80% was the "scholarship" mark hung up by the 198 Norge wholesale men who wrote a 100-question examination on the company's 1940 products at the merchandising clinic held during the annual distributor convention here, reports James A. Sterling, general merchandise manager.

Tieing for top honors with grades of 96% were W. G. Whittingham of Radio Distributing Co., Detroit, and J. M. Sandifer of Cain & Bultman, Inc., Jacksonville, Fla.

TWO-HOUR EXAM

The examination lasted two hours, and 95% of the men writing it answered all the 100 questions, Mr. Sterling said. As they left the examination room following the quiz, the men were given printed booklets containing the correct answers to all the questions. Idea of the quiz was to spur the men on to a better knowledge of Norge 1940 products, so they could tell a more convincing story to dealers and dealer salesmen.

During the washer and gas range sections sessions at the Norge clinic, oral quizzing with cash prizes was employed, in the fashion of the popular radio and theater quizzes. As each man entered the session, he was given a number, for which there was a corresponding number in a hat on the stage.

At the close of the session, the chairman drew a number out of the hat, asked a question of the man with the like number, and paid out a silver dollar if the man answered correctly.

QUIZ PAYS OUT

If the first quizzee failed, a second man got a chance to answer the missed question and a new one, for $2. Some of the questions bore higher price marks, up to $5. All awards were made in silver dollars.

Downing Elected Head Of N. Jersey Leagues

NEWARK, N. J.—Robert F. Downing, manager of E. B. Latham & Co., local distributor for Stewart-Warner refrigerators and Zenith radios, was elected president of the New Jersey Council of Electrical Leagues at its recent annual meeting. Mr. Downing is a past president of the Essex Electrical League.

The council is composed of eight electrical leagues in the state, including Hudson, Passaic, Bergen, Jersey Coast, South Jersey, Burlington, Central Jersey, and Essex.

Cleveland Views Philco's '40 Line

CLEVELAND—Strong, Carlisle, & Hammond, Inc., local distributor for Philco radios and refrigerators, introduced the 1940 line of Philco refrigerators to Cleveland dealers at a dinner meeting here recently.

F.T.C. Cracks Down on Used Appliance Deals

NEW YORK CITY—Under terms of a stipulation entered into with Federal Trade Commission, American Electrical Sales Co., Inc. has agreed to desist from advertising or distributing reconditioned or used electrical equipment without properly disclosing the fact that it is used or reconditioned, and from implying in its advertising or otherwise that the merchandise is new and unused. The company also agreed to desist from misrepresenting prices of equipment.

Freyder Named G-E Supply Manager At Omaha

SIOUX CITY, Iowa—Phil Freyder, formerly salesman for General Electric Supply at Omaha, Neb., has been appointed branch manager for G-E Supply here. Jerry Morris will succeed Mr. Freyder as salesman in Omaha and Council Bluffs.

Veteran Dealer Keeps Pace With Progress; Opens Second Store

NEW BRUNSWICK, N. J.—Andrew Eisler, who for 19 years has been a radio and appliance dealer, has kept expert pace with the times and has gone "modern" with the opening of a last-word appliance store in the heart of New Brunswick's business section. Mr. Eisler also has a store at 119 French St. here which he intends to convert into a commercial refrigeration sales department.

The new branch will be known as The Home Appliance Shop, and Mr. Eisler feels that its convenient location and modern appointments will make a fine showroom for appliances for the up-to-date home. In refrigeration the store will feature Crosley, Westinghouse, and Stewart-Warner. RCA, Philco, and Zenith radios will be carried, and Westinghouse and Bendix home laundry equipment are included in the list of featured appliances.

Completing Mr. Eisler's progressive moves is the enlargement of the service departments of his business to accommodate the increased service activity of the two stores. This department will be maintained at the French St. store.

Sam Vining Tells Coast Men 'Pickles Ain't Sour'

SAN FRANCISCO — Vernon E. (Sam) Vining, director of department store sales for Westinghouse, and George S. Jones, Jr., vice president and general sales manager of Servel, will be guest speakers at the Western Radio and Appliance Trade Dinner, to be held Feb. 7 in the Western Merchandise Mart.

Mr. Vining will attempt to prove to the attending distributors and dealers that "All Pickles Ain't Sour," and Mr. Jones will point the way to "Better Appliance Merchandising in 1940." A program of varied entertainment also will be featured. Charles W. Goodwin, Jr., San Francisco district manager of General Electric Supply Corp., will be chairman of the affair.

Clinic Uses 14 Frigidaires In Cancer Study

SPRINGFIELD, Mo. — Fourteen new Frigidaire refrigerators have been purchased by the Missouri Cancer Clinic here to be used in the study of malignant growths. They will be installed in connection with the operating rooms for permanent use.

Artophone Entertains Dealers In St. Louis

ST. LOUIS—The Artophone Co., distributor for Philco products in the St. Louis area, held a formal introduction of the 1940 Philco line at the Hotel Coronado Feb. 7 for dealers in Missouri and southwestern Illinois.

T. A. Kennally, general sales manager of Philco, Harry Boyd Brown, national merchandising manager, and George Parshall, midwest refrigeration representative, were speakers.

St. Louis Radio Show Is Sponsored By 300 Dealers

ST. LOUIS—"The Land We Live In," weekly radio program sponsored by Union Electric Co., utility; James & Co., G-E distributor; and the Frigidaire branch, has been rescheduled to run through 1940. The hour-long program is jointly credited to over 300 electrical appliance dealers in St. Louis.

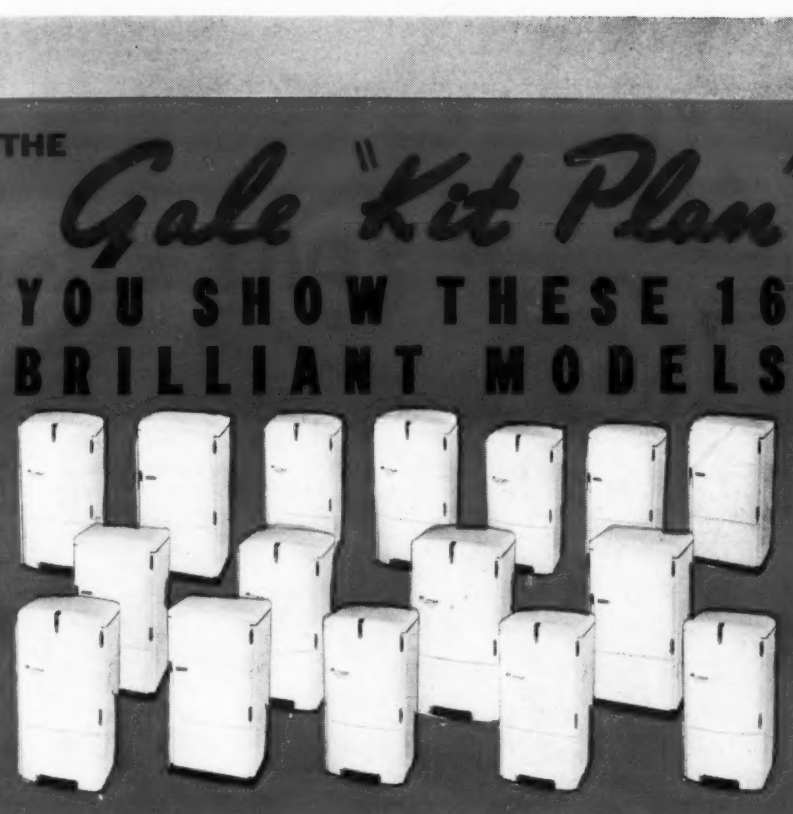
Storz Co. Holds Series Of Four Meetings

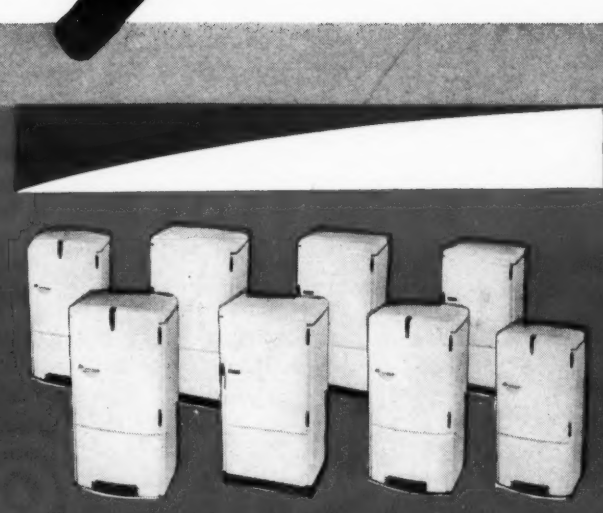
OMAHA, Neb.—A series of four Norge sales meetings was held at the Fontenelle hotel here this month by the Storz Supply Co., distributor in Nebraska and western Iowa. About 150 dealers attended the meetings, conducted by Harry Lewis, regional sales manager for Norge, and Truman Ball, manager of the Norge division of the Storz company.

VOLUME WITH Gale

THE Gale "Kit Plan"

YOU SHOW THESE 16 BRILLIANT MODELS





BUT YOU STOCK ONLY 8

All interior equipment is packed in "kits". 16 kits are available for the 8 refrigerators. They give you 16 different models in logical steps. You purchase the SIZE refrigerators you want plus your own selection of kits. You TAILOR the line to your trade!

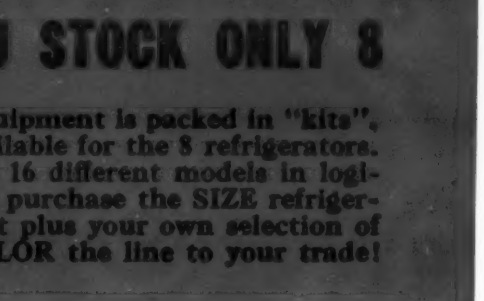
With the Gale 'Kit Plan,' you cut your inventory, yet show more models—you take the gamble out of buying—you keep inventory flexible—you eliminate loss leaders—you build volume and profits—you become the TOUGH competition! Hundreds of dealers have already enthusiastically endorsed the 'Kit Plan'—it will solve serious problems for them. No restrictions on ANY Gale models—FULL MARGIN on every one! We'd like to tell YOU all about Gale for 1940. You NEED Gale! Mail the coupon today—we'll send you complete facts.

"THERE'S REAL MONEY IN THIS 'KIT PLAN'," says DEALER A

"I buy in carload lots and earn quantity discounts. NOW I can buy the SIZES I KNOW I can sell. I add kits to make the MODELS my prospects want! I save on warehousing and handling. Man, this 'Kit Plan' not only solves my toughest problems, but puts EXTRA profits in my pocket!"

"THE GALE 'KIT PLAN' LOOKS GOOD TO ME!" says DEALER B

"I sell 50 to 100 refrigerators a year. Now I can safely buy in larger quantities and KNOW I won't be stuck with slow models. I can show a full line and make money on every refrigerator I sell. This 'Kit Plan' solves MY problems!"



"THE GALE 'KIT PLAN' SELLS MORE FOR ME." says DEALER C

"Folks call me a 'small' dealer. But now I can really sell refrigerators. I show prospects a complete line, without tying up lots of money. Why, I can show FOUR refrigerators for only 50% more than ONE usually costs! The Gale 'Kit Plan' is the first program to really consider me!"

Clip this coupon to your letterhead!

GALE Products
1635 Monmouth Blvd., Galesburg, Illinois

GENTLEMEN: Without obligation, send me full details of the GALE line, the sensational KIT PLAN and your dealer proposition.

FIRM.....

ADDRESS.....

CITY.....STATE.....

BY.....TITLE.....

AIR CONDITIONING & REFRIGERATION NEWS

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Window-Type Air Conditioners Find a Market

OLD SETTLERS in the air conditioning business can recall when the window-type air conditioner was a joke. It was unscientific, it wouldn't do a job, it was merely a "shoebox with a fan and a wet rag" which shady characters sold under false pretenses to sully the fair name of air conditioning.

"Them days," to borrow the patter of the radio comedian, "has gone forever." Window-type air conditioners are not only eminently respectable today, but they have become the "white hope" of both manufacturers and distributors who have been wondering why in the name of Daniel Boone they ever got into such a godforsaken business.

Only a Few Exceptional Dealers Solved the Riddle

Until the air-cooled "packaged" air conditioner came of age, being in the air conditioning business was both an expensive and an exasperating hobby. Manufacturers lost heavy money in it; distributors and dealers went broke in it; franchise turnover was almost scandalous; and it was a headache to almost everybody concerned.

True, scattered here and there, were a few big dealers who combined the attributes of both the successful contractor and the specialty selling organization. They prospered, and encouraged others to try, also.

Small Self-Contained Units Answer Prospects' Objections

But no manufacturer was able to build anything like a national distribution from which he could get enough volume to realize a profit. There were just too many angles to the business for anyone to work out a successful formula which could be applied nationally.

But the window-type air conditioner can be installed by anyone, its installation does not disorganize an office for days or weeks, it needs practically no attention, it can be sold by specialty methods, it can be made relatively quiet, it uses no water, it brings in fresh air, it doesn't take up floor space, and neither its initial price nor its cost of operation are prohibitive.

Listed in the above paragraph, air conditioning salesmen will note, are practically all of the common objections given by prospects for air conditioning. And that last objection — price — is the most common and the hardest to overcome.

At Last—They've Learned What People Will Pay

Most manufacturers in the air conditioning business do not resent Philco's success in selling portable air conditioners last year because in so doing Philco dealers made a discovery which is highly valuable to the entire industry—the answer to a question which has long been a great puzzle to all concerned.

That discovery is the price which people are willing to pay for personal air conditioned comfort. It now appears that such a price is roughly equivalent to that of a household refrigerator.

One authority estimates that a man will gladly pay a dollar a day to have air conditioning in his office or his bedroom. Figure out the number of hot days annually encountered in your community, and you will have a fair idea of the "easy" market for room coolers at prices now available.

Hot States Need Units Of Larger Capacity

Down in hot states like Texas, Louisiana, and Georgia, of course, the ⅓-hp. units which have been sold at less than $150 don't have the necessary capacity to keep an office or bedroom cool in the worst portions of the annual heat wave. In these places, units with ½ or ¾ hp. are needed.

However, these are now available at $200 and less—a fair price, considering the number of hot days they have each year in the torrid South.

It should be noted that a problem arises in connection with the installation of units of ½ hp. or better in many offices. Building regulations often forbid the installation of motors having greater than ⅓ hp. Some distributors have gotten around this—none too scrupulously, to be sure—by installing ½-hp. motors in ⅓-hp. housings and with ⅓-hp. rating tags, which will be supplied on order by certain manufacturers.

Must Be Ready To Sell On First Hot Day

It has also been found that selling window-type air conditioners is something like selling electric fans—you have to have them on the floor, and be ready to go out and sell them, on the first really hot day of the summer.

If that hot day comes early, the dealer is indeed lucky. He can go to town. But if it comes late, prospects may say: "Oh, well, this can't last too long; I'll just wait until next season."

Low Manufacturing Costs Possible on Small Units

Because of their compactness, and because of their utilization of compressors and controls which are already built in large quantities for other purposes, window-type air conditioners can be manufactured by assembly line methods at relatively low cost. Shipping costs are low; so are delivery and installation charges.

Specialty Dealers Need Fair Margin To Succeed

These factors allow the manufacturer to list such units at prices ranging between $100 and $200 retail, and *still allow the distributor the margin he expects on a specialty product* (from 40 to 50%). With this margin he can advertise locally, he can hire and train salesmen, he can sell on 24-month terms, he can display and demonstrate—in short, he can do a real specialty selling job, for the first time since he has had anything to do with the air conditioning business.

Big Job Now Is To Get Specialty Destribution

As soon as enough distributors and dealers of the type who have made household refrigeration so mighty a business can be convinced of the fact that "packaged" air conditioning is now ripe for their efforts, manufacturers should be able to attain sufficient volume to get prices down around the $100 mark.

And *then* it should become the great business everybody has always said it would some day.

They'll Do It Every Time . . . By Jimmie Hatlo

I TELL YOU IT'S A CRIME THE WAY THEY HOOK US FOR TAXES! TAKE CIGARETTES, FOR EXAMPLE WHY, I FIGURED IT OUT - A PACK ONLY COSTS SIX CENTS BEFORE ALL THE TAXES ARE LOADED ON! THANKS, FRED - I'LL TAKE TWO IF YOU DON'T MIND...
WHATS HE MOANING ABOUT? HE DON'T HAVE TO WORRY TILL THEY PUT A TAX ON MOOCHING.
TAKE CIGARETTES, FOR EXAMPLE? HAH HE TAKES 'EM FOR GRANTED.
HE'D STILL CHISEL 'EM IF THEY WERE SIX CENTS A CARTON.
THAT DONKEY NEVER EVEN TAXED HIS ENERGY.
LISTENING TO THE OFFICE FREE-LOADER DO A PATRICK HENRY FOR ANOTHER SMOKE - THEY'LL DO IT EVERY TIME - THANX TO SALVATORE CRACOLICI, NEW YORK
12-6
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LETTERS

'They Got What They Deserved'

Norman C. Muller
215 W. Lorain St.
Oberlin, Ohio

Editor:

I note that in your Jan. 24 issue you have given considerable space to the N.R.D.G.A. to air their woes and grievances. After reading this article, my personal opinion is, they got just what they deserved.

The small dealer that they are hollering loudest about, probably sells all of his merchandise at the regular list price, and after the merchandise is sold, he services it, and he not only services it, but he goes a step farther and educates the customer on how to get the most use out of their appliance.

In other words, the small dealer sells merchandise on his reputation and ability to take care of the merchandise after it is sold.

Our main business is service and repair, but we sell some merchandise to our regular customers. We will not service a Mail Order refrigerator nor will we service a refrigerator sold by a department store unless the customer specifically states that they are to pay for the service.

The department stores in nearby Cleveland advertise a nationally known make at about $30 less than the regular list price. When the prospect goes into Cleveland, they will find that it is a stripped box, one that has no accessories.

Would you buy an automobile without the spare tire, bumpers, windshield wiper, etc.? Why buy a refrigerator without the accessories? Why advertise a refrigerator without the accessories?

A good service organization is just as important as a good sales organization. A department store that sells refrigerators without providing a good service set up deserves to be run out of business.

The small independent dealer, the "price cutter," the "crook," the "black sheep," has to service the equipment he sells, or soon locks his front door forever.

The sooner these great big department stores quit selling refrigerators, and get back to selling dry goods, the better off they will be.

NORMAN C. MULLER

Those Sears Boys Don't Miss Anything

Sears, Roebuck & Co.
820 W. Broadway
Louisville, Ky.

Sirs:

Enclosed you will find 10 cents in stamps to pay for the back issue of Jan. 10, 1940, which I would like to receive from you.

I am a regular subscriber, but most of the issues I receive look like a pile of clippings when I have finished with them, and as there is some material on the back of one page of this issue which I wish, would appreciate your sending me this copy.

J. F. BLACKBURN,
Division Mgr.

How To Obtain 1940 Trade-In Books

McTiernan & Coffey Electric Co., Inc.
Electrical Engineers and Contractors
630 East Main St.
Little Falls, New York

Editor:

Please advise us where we can secure an up-to-date blue book of trade-in values for used refrigerators and the cost of same. We are enclosing stamped envelope and would appreciate your prompt reply.

T. P. MCTIERNAN

Answer: The 1940 National Market Index of Trade-in Values for Used Refrigerators (household models) gives illustrations and suggested trade-in allowances for all models and years of the popular makes of refrigerators.

Through arrangements with the publisher of this book, we have reserved a limited quantity of the 1940 edition, which we are now offering with a full year's subscription to AIR CONDITIONING & REFRIGERATION NEWS at a combination price of $5.50.

The Market Index alone costs $3.50 and a subscription to the NEWS is $4.00 so the combination price offers a saving of $2.00.

Electrolux Holds The Basic Patents

Dallas Engineering Co., Inc.
1115 Hall St.
Dallas, Tex.

Editor:

We are anxious to obtain a connection as a distributor for a line of gas-operated refrigerators, particularly Butane gas. If you know of any concern beside the Servel Electrolux which make such a refrigerator, we would certainly like for you to send us their name.

MELVIN W. JACKSON

Answer: At the present time the Servel Electrolux is the only gas-operated refrigerator on the market. By means of extensive control of patents in this field, Servel has exercised a virtual monopoly on gas-operated absorption type refrigerators for many years.

However, the "first bank" of basic patents on this type of refrigeration system will expire in 1941, and several manufacturers are working feverishly in their laboratories to develop refrigerators which can take advantage of this fact.

When Distributors Cross Lines...

The Parris-Huffman Co.
700 Breece St.
Charleston, W. Va.

Editor:

It is our understanding that you carried a news item some two or three years ago concerning a decision handed down by one of the higher courts involving infringement by one wholesale distributor in another distributor's territory.

As we recall, one distributor was located in New York, and another in Connecticut. If you have this information available or can tell us how to find it, we would greatly appreciate receiving it by return mail.

F. G. PARRIS

Answer: The June 3, 1936 issue of AIR CONDITIONING & REFRIGERATION NEWS reported a lawsuit between the Rackliffe Bros. Co. of New Britain, Conn., and the Mayflower Sales Co., Inc. of Hartford, Conn., concerning a situation similar to that which you describe.

Freezer-Refrigerators

Applegate Advertising Agency
Muncie, Ind.

Editor:

Referring to your issue of Nov. 29—page 6, column 3, third paragraph under the heading "What Lies Ahead"—please send us by return mail the names of the three commercially built domestic freezer-refrigerators that Mr. Parker reports now on the market.

If you cannot supply this information, will you instruct us how to obtain it? The matter is urgent.

M. RAY APPLEGATE

Answer: Following are the three companies to which Mr. Parks referred:

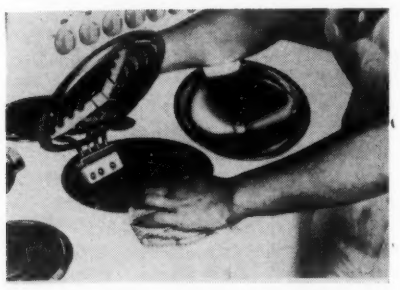
Continental Corp., Fond du Lac, Wis.
Stewart-Warner Corp.
1826 Diversey Parkway, Chicago, Ill.
Emil Steinhorst & Sons, Inc.
612 S. St. at St. Vincent, Utica, N. Y.

Improved Surface Units, Added Gadgets Feature New G-E Range Models

BRIDGEPORT, Conn. — Further improvement in the Calrod high-speed surface unit marks the 1940 G-E range line now being presented to dealers throughout the country.

"Changes in the line," declares J. R. Poteat, manager of the water heater-range section, "primarily reflect demands by the industry and the public for fewer models, lower prices, and strong demonstrable features which will carry the story of modern electric cookery into new markets and new homes."

Four classifications of ranges are featured in the new line—a deluxe series of two models with Tel-a-cook lights to signal the different switch stages of position in color at a glance and "Tripl-oven" with Calrod oven units; a master series, of three models, with all-porcelain body and striking new styling; a special series of two models, designed for specific campaigns; and one model which to date constitutes the apartment line, designed for large capacity in small space. In addition to the eight new models, the large GE "Imperial" range is retained in the line without change.



Hinged ring and removable one-piece drip pan are features of the new Calrod surface units.

On the two top models in the deluxe series a new high-speed five-heat thrift cooker replaces the three-heat unit used previously.

A redesigned cooking top, automatic oven lighting, bright-finish oven shelves, and new accessories are among the other new features.

The new Calrod surface units, with five speeds, which are standard equipment on the new G-E ranges, incorporate advancements in appearance, speed, durability, cleanliness, and efficiency.

Side terminal construction permits the use of a new drip pan and removes the terminals and leads from the spill zone.

Greater speed is gained by a 33% more flattened surface of the coils and newly designed rigid supports to keep the coils in place. This results in more utensil contact. The new design of the drip pan returns greater heat to the utensil from the underside of the coils.

The automatically lighted oven has sliding shelves.

A decrease of coil weight of 17% in the utility size, and 21% in the giant size, results in less unit mass to heat, and hence rapid response, it is said.

Longer life in Calrod units is gained by an improved nickel-chrome resistance wire; by precision coiling to prevent hot spots; by special centralized loading of the coil to maintain high insulation resistance; and by a uniform density of the oxide packing through swaging and flattening. An improved method of locking coils to the supporting spider insures their remaining in a plane, giving better utensil contact and resulting in lower operating temperature.

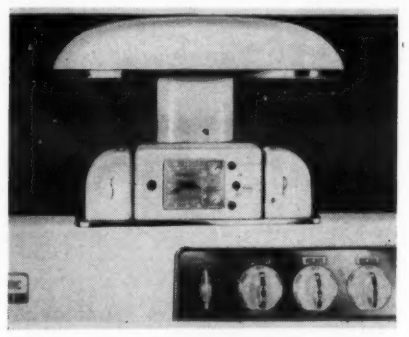
The unit terminals are grouped at one side to remove them from the heated zone, preventing oxidation and failure. A new terminal block of heat-resistant porcelain is located away from the heated zone. The hinging of the unit rings to the cooking top prevents rotation and eliminates the possibility of kinking and severe flexing of the leads, and also provides a permanent electrical ground for the unit, rendering a ground conductor unnecessary.

Wiring from the switch panel to the surface units on the new ranges is located in a metal channel under the cooking top, and is thus protected from spillage and abrasion. The glass seal hermetically seals the unit against entry of dirt, air, grease, and moisture.

The new high-speed thrift cooker has a 1,200-watt five-heat unit. Food may be brought to the steaming stage rapidly to decrease the over-all cooking time. An oven-temperature power cut-off is built into the cooker well and automatically prevents overheating of the pail should the contents boil dry.

Cooking tops of the new ranges have been redesigned to accommodate the new surface units, as the unit openings are deeper and smaller in diameter. This has resulted in a flatter, more rigid top.

Ovens have a silent adjustable ball-bearing-equipped counterbalance and automatic concealed latch on all drop-type doors. Ovens are equipped with two sliding adjustable shelves, in a bright finish, arranged for greatest flexibility in use.



Timer-lamp assembly and a portion of the switch panel.

Automatic oven lighting is a feature of the top models. A broiler meter appears on one side of the oven lining. In all but special ranges, a new hydraulic control, utilizing a bulb and diaphragm, results in improved oven operation through closer regulation.

The 1940 range switches incorporate several improvements, including better indexing. When operated, the button stops in correct position without "backlash." A new lower priced 400-watt warmer unit, standard equipment on the deluxe "Chancellor," is available as an accessory on most models.

Provision is made in the new ranges for substituting storage drawers for base panels and warming compartments for upper storage drawers. A sliding cutlery tray is a new accessory.

Preview of MKB's New Range Promotion

Art Grove (left) of Hotpoint, chairman of the electric range advertising committee of the Modern Kitchen Bureau, joins committee members Roger Bolin of Westinghouse and Walter Rowe of Estate Stove in a before-the-curtain inspection of display pieces to be used in the bureau's range campaign this year. Featuring a six-color window banner, this material includes six counter cards and an enlarge magazine advertisement.

Crosley Gas Ovens Have Lights & Glass Doors

CINCINNATI — A double glass oven door and an interior light which can be switched on and off so the housewife can tell how her baking is progressing without opening the oven door is billed as the top feature of the new Crosley Deluxe gas ranges.

Oven door is counter balanced and equipped with automatic stop that holds door slightly open when broiling. Fiber glass insulation in the door is 1¾ inches thick. Approximately 2 inches of this same insulation is used on the oven body.

New and highly improved top burners are said to save up to 50% on gas. They are made of nickel aluminum, so are easy to clean. There are no separate grates, bowls, lighter tubes, or heavy top plates to remove or replace. Burners light at the turn of the valve, eliminating the necessity for matches.

Also listed among the features of this range are improved thermostat and valves, soundproof utensil drawers that slide on fiber rollers, and removable oven bottom. The large smokeless broiler grill is made of cast aluminum and is designed to keep fat away from the flame.

Two standard models also are offered, one for apartment house use. These ranges have many of the features of the Deluxe models, it is said.

Caywood and Sprague Win $300 MKB Utility Award

NEW YORK CITY—R. E. Caywood and B. C. Sprague of the research department of West Penn Power Co. have been awarded first prize of $300 in Modern Kitchen Bureau's 1939 national contest for utility executives and engineers. The contest was for the best paper on the subject: Advisability of Competitive Water Heater Rate and Advantages of the Water Heater Load.

Second award and cash prize of $200 went to Roy Thurman of Indianapolis Power & Light Co.

Purpose of the contest was to develop facts and ideas as to whether the electric water heater load is or can be made profitable to utilities.

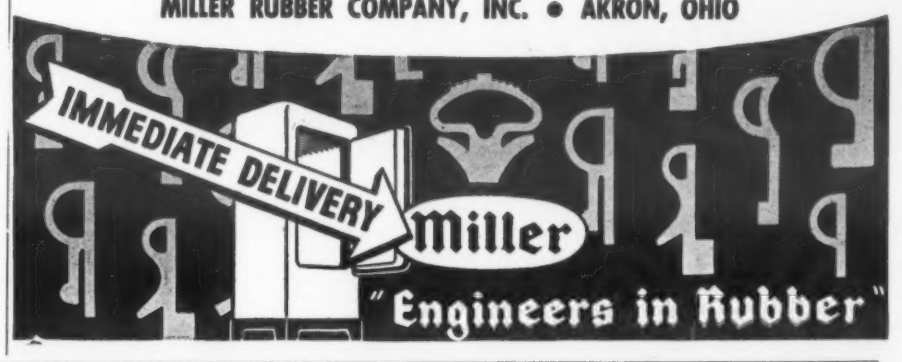
YOU CAN'T MATCH MILLER

Replacement Door Gaskets for Design and Quality

★ The reason is simple. Miller has been the electrical refrigeration industry's primary source of supply for door gaskets for almost 20 years. Every major improvement made in this product during this period has been pioneered by Miller engineers. That means every Miller replacement door gasket duplicates the "original" both as to design and quality. All are made from the same dies—of the same wear and age-resisting rubber compounds.

You can solicit the cream of this replacement business with the Miller line, too, because its 28 different types enable you to service 80% of all refrigerators regardless of make. Get the facts now! Write for price list and dimensional drawings.

MILLER RUBBER COMPANY, INC. • AKRON, OHIO



DU PONT REG. U.S. PAT. OFF.
Artic REG. U.S. PAT. OFF.
The Preferred METHYL CHLORIDE
COAST-TO-COAST Distribution

E. I. DU PONT DE NEMOURS & CO. (INC.)
The R. & H. Chemicals Dept.
Wilmington, Delaware
District Sales Offices: Baltimore, Boston, Charlotte, Chicago, Cleveland, Kansas City, Newark, New York, Philadelphia, Pittsburgh, San Francisco

One Coil—One Compressor—One Locker Plant

Ducts, Damper Motors, and Transoms Assume Vital Role In Ingenious Nebraska Layout

HOOPER, Neb. — Operation of a locker plant with the use of one coil and one compressor features an installation recently made here in Ulich Bros. Butcher Shop by August Schenzel, Fremont, Neb. representative of Brunner Mfg. Corp. and McQuay, Inc.

Using an ingenious plant layout and a system of ducts, damper motors and transoms, Mr. Schenzel has also in this plant developed a reach-in refrigerator at one end of the chill room for the use of the plant owner in operating a retail butcher shop at the front of the building.

"While only 100 lockers have been installed so far," states Mr. Schenzel, "the locker room can accommodate 225 lockers, and the entire job is powered with one 5-hp. compressor.

SIMILAR SET-UP

"A newer plant of the same size completed recently is operating 100% with a 3-hp. unit."

As shown in the drawing, the plant is "L" shaped, the insulated portion being approximately 30 feet long, the locker room 16 feet wide, and the chill room 10 feet wide. Located in the 7-foot by 5-foot 8-inch freezer compartment is a W500-F Brunner 5-hp. compressor and a McQuay Type L5 Zer-O-Pak unit.

Two outlets are provided for the cooled air from the freezer room to the locker room with one return inlet, and one outlet and one inlet is provided for the chill room.

TEMPERATURE RANGE

Temperatures in the freezing compartment vary from 0° to 5° below and temperature in the locker room varies from 0° to 10° above, and 33° to 34° above is maintained in the chill room by the use of 100-lb. Minneapolis-Honeywell damper motors in the outlet openings.

The entire job is controlled by a single expansion valve and three thermostats, one located in each of the compartments.

At the front of the chill room three reach-in doors have been installed, allowing the butcher operating in the front of the plant to store retail cuts within the chill room. A separate walk-in door is at the side.

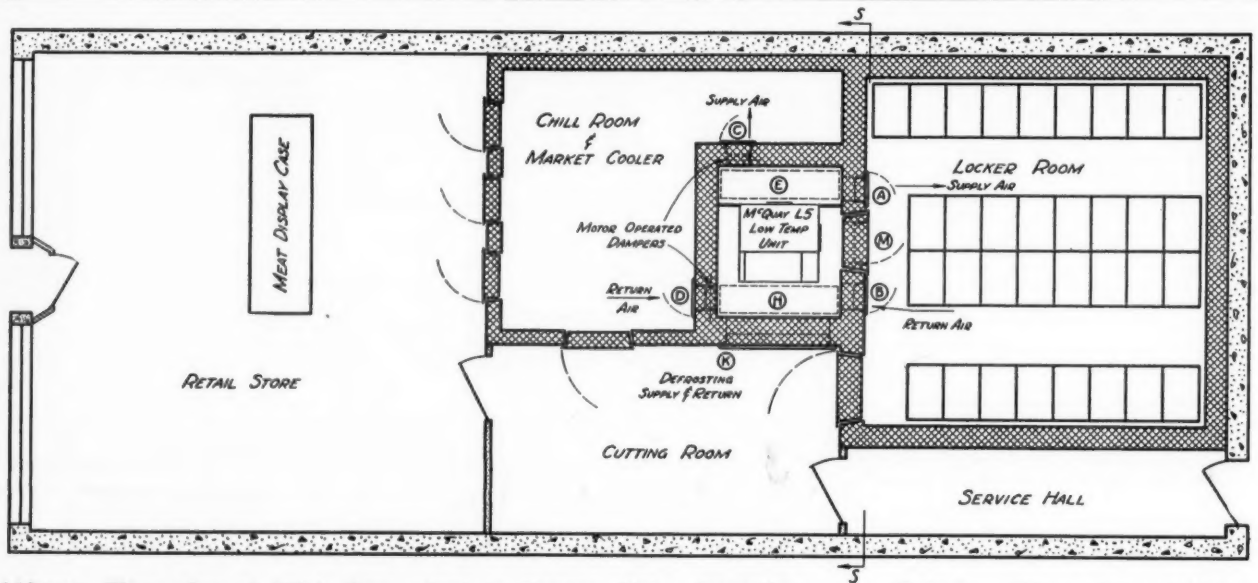
Defrosting, which is recommended as a daily process, is accomplished by the use of a transom at the top of the door leading into the freezer room. In defrosting this job, it is merely necessary to shut the compartment inlet and outlet doors from the freezing room to the chill and locker rooms and pull the switch operating the liquid line solenoid and pressurestat. The transom from the locker room to the unrefrigerated portion of the plant is then opened. Complete defrosting is said to be accomplished in about 15 minutes.

The job which was installed in the spring of 1939 was found to have an unlooked-for advantage in the summer months inasmuch as the defrosting cycle throws a volume of cooled air into the unrefrigerated portion of the plant and into the butcher shop giving some degree of comfort cooling effect.

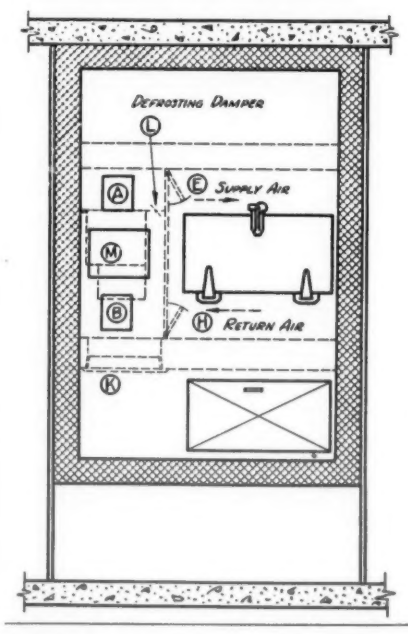
Operating costs of the butcher shop and plant including light, power, use of meat grinders and cutters, etc. average approximately $40 per month.

LITTLE DEHYDRATION

Mr. Schenzel states that the operators are particularly pleased with the low dehydration loss in the system. Part of this he attributes to the construction of the plant and part to the aluminum fin coils in the Zer-O-Pak unit. The owners have also commented on the lack of locker room odors which has resulted from the use of high velocity air distribution throughout this room.



(Above) Floor plan of Ulich Bros. plant in Hooper, Neb. Operating cost of the entire plant averages only $40 per month, it is claimed.



(Below) Side view looking through the "heart" of the plant's cooling system, showing course of air movement.

Freezing of Southern Crops Keys New Frozen Foods Advertising Drive

NEW YORK CITY—Timely demonstration of how frosted foods can help alleviate the crisis created by unseasonable weather and crop failures was employed by Frosted Foods Sales Corp. during the recent cold snap, with special Birds Eye copy appearing in newspapers in 40 key cities.

Sales story was built around the freak frigid spell that has engulfed the South in recent weeks.

"Crops ruined! Price rise! but . . . No advance in Birds Eye prices!" was the headline. Spinach, green beans, and wax beans are the Southern crops affected. The company bases this claim on the fact that its products do not emanate from Southern sources, and that those on the market now were packed last summer.

Birds Eye now has about 6,500 retail outlets, a company official said, having gained about 1,400 during the past year.

Rapid Spread of Frozen Foods Industry Claims Attention of Leading Food Distributors

CHICAGO—The increasing importance of refrigeration to the food industry was made plainly evident at the annual directors meeting of the National Food Distributors Association held here recently, as frosted foods grabbed the major share of the food men's attention.

E. J. Martin, secretary of the association, reported that 57 more members had taken on the distribution of various brands of quick-frozen foods in different sections of the country during the past year.

One distributor member opened up 100 new outlets for quick-frozen foods in his own city during the past year, while others who had been in the business previously reported a continued increase in outlets, as well as in volume of sales per outlet, he said.

LUNCHEON GET-TOGETHER

The recent frosted food luncheon of the Canners' Convention was attended by many of the important quick-frozen food packers, processors, distributors, and equipment manufacturers, who agreed that the increased sales of frosted foods during 1939 pointed to an early culmination of plans for a detailed study by representatives from all branches of the business, with a view toward a dealer and consumer educational program which would be put in operation at an early date.

Mr. H. C. Diehl of the United States Department of Agriculture and L. F. Noonan of the California Frosted Food Institute stressed the rapid growth of the industry during the past year and advocated an early all-industry effort towards an improving and standardization of quality and a concentrated national effort toward educating both the dealer and the consumer on the advantages of quick-frozen foods.

DISPLAY PLANNED

John E. Cain, the association's president, announced that a committee would be formed to act for the association in connection with its fourth annual quick-frozen food display at the N.F.D.A. meeting and show in Chicago next August. Nationally known speakers will participate in the departmental meetings devoted exclusively to the subject of quick-frozen food merchandising, packing, distribution, transportation, and advertising.

The coming convention will see the largest number of exhibitors of this type of merchandise ever assembled, it is predicted, with more space already taken for this display of quick-frozen food and equipment than in the 1939 convention.

Portable Odor Absorber Developed By Dorex

NEW YORK CITY—A new portable "odor absorber" employing the principle of the ordinary gas mask has been developed by the Dorex division of W. B. Connor Engineering Corp. for removing unpleasant odors, gases, vapors, smoke, and fumes from theaters, restaurants, offices, factories, hospitals, and like places.

The "squirrel cage" odor absorber, as it is called, employs the positive extraction principle of air-odor removal, using an adsorption medium composed of a specially processed coconut shell carbon.

Two types of units are offered, one for wall or ceiling installation and the other applicable to existing ventilating or air conditioning systems. The smaller or "squirrel cage" type consists of a fan inside a cylindrical shaped cage of perforated metal cylinders containing the carbon substance. As the air circulates through these cylinders, a portion of the odors is permanently adsorbed. The carbon is claimed to be capable of holding more than 20% of its own weight of odors.

Larger unit, for installation in existing ventilating or air conditioning systems, operates on the same principle, and is claimed to effect a saving in operating cost by reducing amount of outside air that need be cooled or heated before being introduced into the system.

Three More Locker Plants—

One In Iowa

EDGERTON, Wis.—Clifford Townsend, operator of a locker plant at Albion, Wis., opened a new locker plant here Dec. 20. The new unit is fitted with York equipment.

* * *

One in Wisconsin

NEW ALBIN, Iowa — The New Albin Co-operative Creamery Co. has installed a locker plant, opening of which is scheduled for Feb. 10.

* * *

And One In Utah

PROVO, Utah—J. B. and J. A. Seethaler, co-owners of the Provo Lunch Meat Co., have installed a refrigerated locker plant here.

Now IN ONE UNIT!
SHARP FREEZER • COOLING EQUIPMENT
PLUS WATER DEFROSTER

LOOK AT THESE ADVANTAGES
Lower Power Cost
Quicker Freezing
Water Defrosting
Factory Engineered
Low Original Cost

THE NEW McQUAY Locker Room Unit with built-in sharp freezer cabinet and water defroster, is self-contained. It eliminates the sharp freezing room and thus permits more net rentable space. Available in sizes to balance compressors of 1, 1½, 2, 3, 5 and 7½ h.p. Easily installed. Defrosts in 4 to 5 minutes. With all its advantages, this new McQuay Locker Room System costs no more than older methods. See your locker plant engineer or write to McQuay, Inc., 1607 Broadway, Minneapolis

McQuay ZERO-PAK LOCKER ROOM UNIT

ANSUL ICE-X ENDS ICE TROUBLE!*

Ansul ICE-X gives immediate relief from ice trouble. It dissolves *formed* ice, it prevents *new* ice. It is hazard-free, safe, easy to use.
Order Ansul ICE-X from your nearby Ansul Jobber today. Let actual use show you how this machine-tested ice-eliminator does the job—how it can save you service troubles.
* ICE-X will not cure troubles caused by wax, sludge, dirt or mechanical difficulties.
AC-23
ANSUL ICE-X will not corrode. It leaves no residue. It will not react with refrigerants or oil. It is equally effective with methyl chloride, acrolein methyl chloride, methylene chloride, and all "Freon" refrigerants.
25TH ANNIVERSARY 1915-1940
ANSUL ICE-X ANSUL CHEMICAL COMPANY MARINETTE, WIS.
THE ANSUL JOBBER NEAR YOU WANTS TO SERVE YOU BETTER

At Last THE Humidome
COMBINES IN ONE MACHINE WINTER HUMIDIFICATION · SUMMER SPOT COOLING
Dealers' territories open. Write at once for complete information. Address!
THE HARRY ALTER CO.
1728 S. MICHIGAN AVENUE, CHICAGO, ILL.

Western New York Council Plans Big Year; Davis Proposes National Promotion Drive

BUFFALO — Approximately $800,000 worth of air conditioning business will be done in western New York state in 1940, according to an estimate made by Edwin R. Cooney, newly elected president of the Air Conditioning Council of Western New York. Other new officers of the council, installed at a meeting here Jan. 30, are: Richard H. Mollenberg, vice president, and Lars Hedstrom, treasurer. Joseph Davis is the retiring president of the council, and Walter P. Davis continues as executive secretary.

Outlining the policy of the Buffalo council for the coming year, Mr. Cooney said: "We plan to see that every man in the council has a job to do and that he does it. This year we hope to do something about the air conditioning business in western New York. The day of domination by the individual is past—we must work together as a group. The manufacturers are starting to make money, and it's high time the dealers got over on the profit side of the ledger."

Secretary Davis, in reporting on the organization meeting of the National Air Conditioning Association, which he attended in Chicago, said that he wanted "to dispel any ideas regarding our participation as a council in this organization.

"The men seeking this organization were in the contracting business," he said. "There were no dealers represented. It looked as though these fellows wanted a contractor's organization for their own purposes only."

Mr. Davis said he told the group that a national organization should be composed of delegates from the local councils all over the country. "I told them that the national group would have no efficacy in helping members of the trade solve their local problems.

"But it appeared that the contractors wanted to run the show—so all I can say is, let them have it. The crying need in the air conditioning business today is not a contractor's organization, but a strong national promotional outfit.

"They couldn't see it that way—so we in western New York are going to launch our own national promotional drive and finance it ourselves," Mr. Davis concluded.

President Cooney announced the following committee appointments:

Program, Sherman W. Strouse, Trane Co., chairman; Joseph Davis, Davis Refrigeration Co., Inc.; and D. J. Peterson, Minneapolis-Honeywell Regulator Co.

Winter air conditioning: A. G. MacDiarmid, American Lubricants, Inc., chairman; Lars Hedstrom, General Air Conditioning Co., Inc.; H. L. Householder, Householder Heating Corp.; M. J. Rodman, Rodman Engineering Co.; and Glen Bolton, Niagara, Lockport & Ontario Power Co.

Process air conditioning: DeWitt L. King, Niagara Blower Co., chairman; Roswell Farnham, Buffalo Forge Co.; L. N. Reed, Cooney Refrigeration Co., Inc.; R. L. Mollenberg, Mollenberg-Betz Machine Co.; and W. A. Meiter, Worthington Pump & Machinery Corp.

Summer air conditioning: Mr. Mollenberg, chairman; Mr. Reed; J. K. Hawks, General Air Conditioning Co., Inc.; J. L. McDevitt, Joseph Davis, Inc.; G. H. Dietrich, McCarthy Bros. & Ford; John Minor, Coleman-Stratton, Inc.; A. L. Stevens, Mollenberg-Betz Machine Co.; H. J. Botchford, George W. Drake, Inc.; and Mr. Meiter.

Automatic heat: Joseph Collins, Frontier Engineering Corp., chairman; Mr. Householder; and Mr. Hedstrom.

Air conditioning accessories: Arnold R. Kamman, A. R. Kamman Co., chairman; Walter Voisinet, John J. Nesbitt, Inc.; and Mr. Peterson.

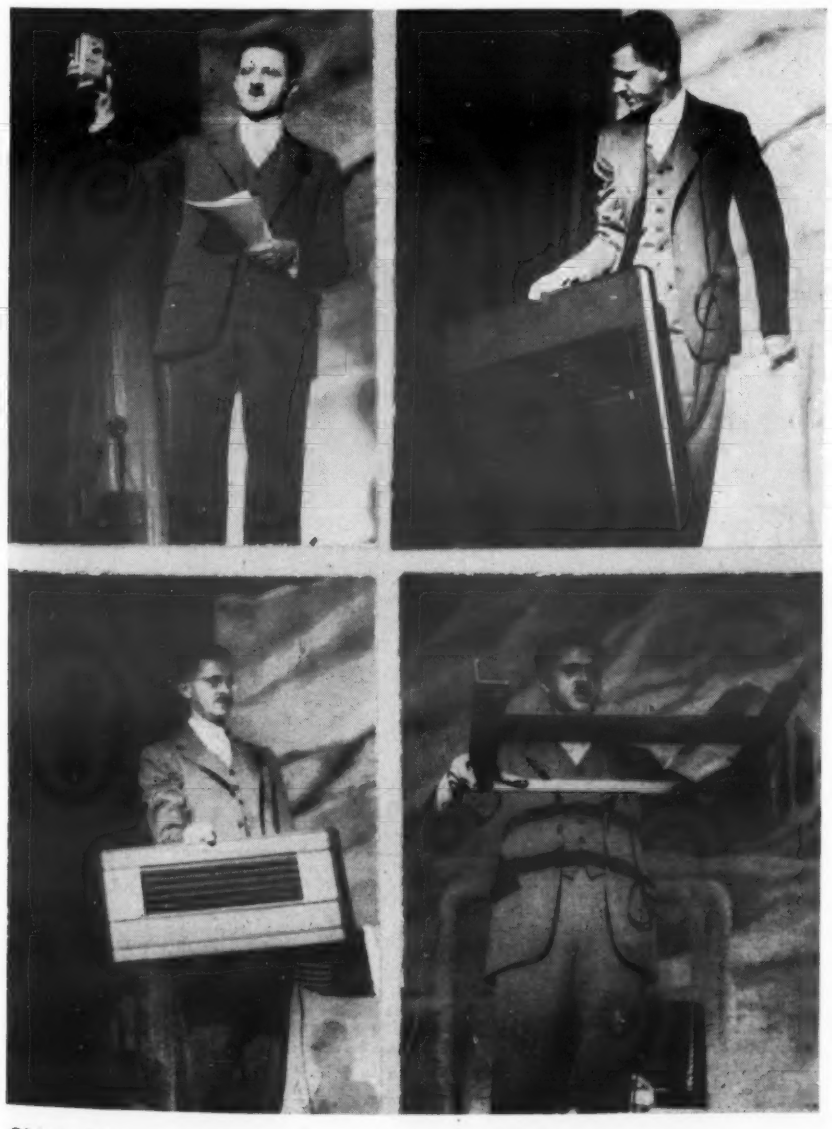
Publicity: Marshall Drake, George H. Drake, Inc., chairman; Charles A. Michie, Buffalo, Niagara & Eastern Power Corp.; C. E. Daly, Buffalo Evening News; George Foster, Buffalo Courier-Express; and A. E. Stratton, Coleman-Stratton, Inc.

Membership: Harold C. Day, American Radiator Co., chairman; C. P. Yoder, Buffalo, Niagara & Eastern Power Corp.; S. B. Howe, General Air Conditioning Co., Inc.; A. L. Colvin, Niagara, Lockport & Ontario Power Co.; and Dr. N. W. Strohm, Medical Society of Erie County.

Finance: Mr. Cooney, chairman; Mr. Hedstrom; Marshall Drake; Mr. Mollenberg; Joseph Davis; and A. E. Stratton.

Mr. Cooney announced that the next meeting of the council would be held Feb. 27 in the University club, with Frank Lovejoy of Socony-Vacuum Oil Co. as speaker.

Bob Herr Says It's Easy



Chief Air Conditioning Engineer R. F. Herr of Philco shows new Minneapolis-Honeywell control which turns window conditioner on in advance of time needed; then demonstrates how the Philco air conditioner can be installed or dismantled for service in a jiffy.

Conditioning Sets Fast Pace In Alabama, Reports Show

BIRMINGHAM, Ala. — Complete year-around air conditioning is now being installed in the 21-story Webb Crawford building here. The 400-ton installation, which includes the quarters of the First National Bank, is being made by Shook & Fletcher Supply Co., distributor for Carrier Corp.

A silica gel job has just been completed in the city's other major bank, the Birmingham Trust & Savings Co. This installation also was made by Shook & Fletcher.

Recent drug store installations here include the Lane Drug Co.'s downtown store (Carrier) and a new Walgreen super-store, which was air conditioned by Bethune Electric Co., Westinghouse distributor.

The Bethune Co. also has the contract for installing air conditioning equipment in the operating rooms of the 17-story Jefferson Hospital, now being erected.

Art Gallery Contract Awarded In West

LOS ANGELES—The Western Air & Refrigeration, Inc., 1234 S. Grand Ave., has been awarded the air conditioning and ventilating contract on the alterations to the Art Gallery in the Los Angeles County Museum, located in Exposition Park, Los Angeles.

Doctor Wants Conditioning To Control Air Pressures, End Grouchiness

MILWAUKEE — Physical well being of mankind is directly affected by barometric pressures, in the opinion of Dr. William F. Petersen, pathologist and bacteriologist of the University of Illinois. Speaking here recently, Dr. Petersen expressed the opinion that some apparatus for controlling the air pressure in a sick room would be a great boon to medicine, and indicated that such equipment should be developed by the air-conditioning industry.

The doctor asserted that air pressure plays an important role in health, and that anyone feeling a grouch should consult the barometer. It is 10 to one, said Dr. Petersen, that the barometric pressure will be going down.

CAUSE OF TOOTHACHE?

Pain in an aching tooth may be caused in some degree by high atmospheric pressure; the ability of an athlete to perspire and the tone of his muscles vary with the air pressure; the nervous, mental and even digestive systems react to the stimulus of air pressure.

In normal persons, Dr. Petersen said, high barometric pressure increases the blood pressure and they feel full of pep. However, when the pressure makes the blood sluggish, the effect is to put one in the dumps.

Changes in atmospheric pressure work the hardest suffering on the young, old, and sick. Ordinarily healthy persons, the doctor explained, can readily adjust their bodies to outside influences. Dr. Petersen said that changes in the barometer should serve as a warning to physicians to be especially watchful over their patients.

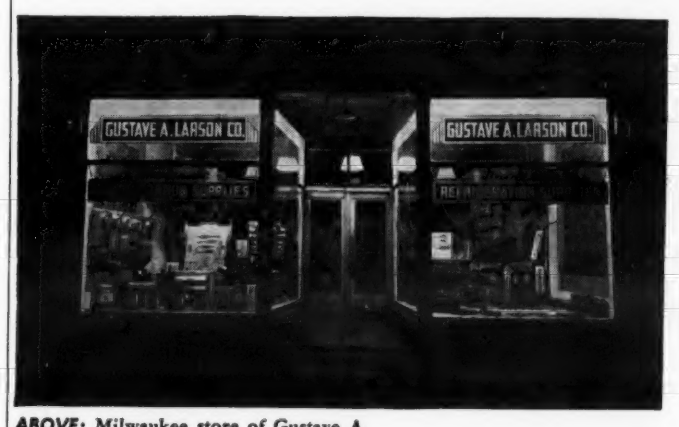
On the basis of a survey, the doctor concluded that the death rate is in direct proportion to the ups and downs of atmospheric pressure. Sudden increases or decreases in the pressure, he declared, often show an adverse effect on patients who appeared to be on the road to recovery, and sometimes the shock is so great it causes death.

A study of Chicago weather tables from 1915 to 1932, according to Dr. Petersen, showed that deaths increased as the barometer went up and decreased as the atmospheric pressure declined.

He described the area in the vicinity of Chicago and Milwaukee as one of the world's worst climatic regions, because it lies in the path of storms from both the Arctic and Southwest, and consequently suffers great barometric changes.

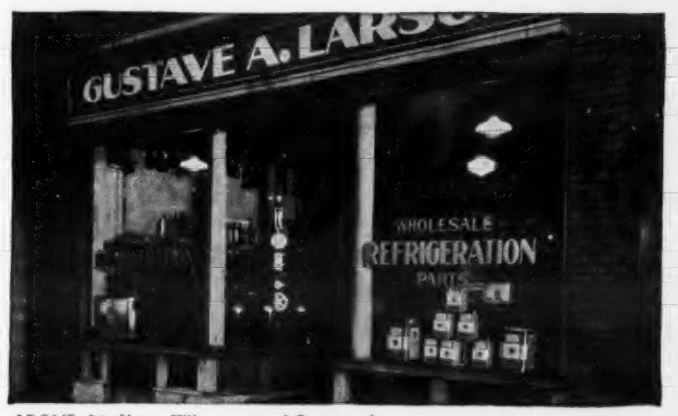
Spring fever, Dr. Petersen said, is the result of continually changing air pressures and temperatures throughout the winter. The constant need for adjusting the body to withstand the shifts in pressure and temperature tire it out, and by the time the first balmy days of spring come around, people are fatigued.

JOBBER SATISFACTION
RUNS HIGH HERE



ABOVE: Milwaukee store of Gustave A. Larson Co., who sell Texaco Capella Oils.

BELOW: Oshkosh, Wis., store of Gustave A. Larson Co. displaying Texaco Capella Oils.



ABOVE: Madison, Wis., store of Gustave A. Larson Co. featuring Texaco Capella Oils.

BELOW: Rockford, Ill., store of Gustave A. Larson Co. Read Mgr. Barney's letter below.

You, too, can make a success with Texaco Capella Oils. For prompt service and deliveries phone the nearest of 2279 warehouses in the U.S.A., or write:

The Texas Company, 135 East 42nd Street, New York, N. Y.

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Texaco Dealers invite you to tune in The Texaco Star Theatre—a full hour of all-star entertainment—Every Wednesday Night—Columbia Network—9:00 E.S.T., 8:00 C.S.T., 7:00 M.S.T., 6:00 P.S.T.

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September 10, 1939

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Gentlemen:

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We have never had a complaint, and as you know, our volume in this item is constantly increasing.

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Very truly yours,
CUSTAVE A. LARSON CO.
Fred Barney
Fred Barney
Manager Rockford Branch

TEXACO Capella Oils

Bacteria Killing Power of Ultra-Violet Rays Demonstrated Before Engineers

CLEVELAND—A dramatic demonstration of the power of ultra-violet rays to kill bacteria was given by Dr. H. C. Rentschler, of the Westinghouse lamp division, and Dr. Rudolph Nagy, of his research staff, before members of the American Society of Heating & Ventilating Engineers at their annual meeting here.

Bacteria in solution were magnified and projected on a screen so that the audience could tell they were very much alive. The slide was then exposed to radiation from a "Sterilamp" and the bacteria were killed instantly—before the eyes of the audience.

Thus the power of the ultra-violet lamp was demonstrated and its use in air conditioning illustrated. Actual tests in an air duct delivering 5,800 c.f.m. in an auditorium at the Westinghouse lamp division proved that 40 lamps killed 99.5% of all bacteria passing through the duct; 32 lamps killed 98.2%.

It has been found there is no difference in the bacterial effect of ultra-violet rays over a range of relative humidity between 35 and 95%, or over the normal range of temperature usually found in air conditioning systems. The use of ultra-violet radiation for destroying bacteria, when properly applied, has the advantage over other bactericides in that nothing is added to or removed from the air.

Hundreds of tests in the laboratory and at the auditorium installation preceded announcement of the new application for the Sterilamp, slender tubular source of ultra-violet radiations of a wavelength known to be most fatal to bacteria. Many of their tests to determine the effect of different "doses" or concentrations of ultra-violet rays on various organisms were substantiated in university laboratories, especially those on pathogenic organisms.

Bacteria known as "Escherichia coli" were selected as index organisms, primarily because they are nonpathogenic and their resistivity is approximately the same as that of most pathogenic organisms which are believed responsible for the transmission of various respiratory diseases.

From the results of bacteria resistivity tests and the known strength of the lamps, Dr. Rentschler and his assistants were able to calculate the number of lamps required for a duct handling any given volume of air. In the test installation, forty 30-inch lamps—eight in each of five rows—were mounted on 10-inch centers in a radiation chamber 75 inches wide, 30 inches deep, and 80 inches long.

A humidifier was used to spray bacteria into the air in the auditorium near the air intake duct using only recirculated air. A centrifuge was employed to test effectiveness of the lamps in the duct by taking samples of air at the outlet grilles entering the auditorium. During the tests, filters normally in the ducts were removed.

The procedure in each test was to take samples of air with the lamps off, followed by samples with the lamps on, and again with the lamps off. From a comparison of the average of bacteria colonies of the two controls, namely the first and third, and the sample of the air with the lamps on, the percentage of bacteria killed was computed.

A definite amount of radiation is necessary to kill a given percentage of the bacteria as they move rapidly in the duct. Intensity of the radiation is greatest at the surface of the lamp and falls off with increasing distance. The most economical use of radiation in a duct is under conditions in which there is nearly a uniform intensity through the cross section.

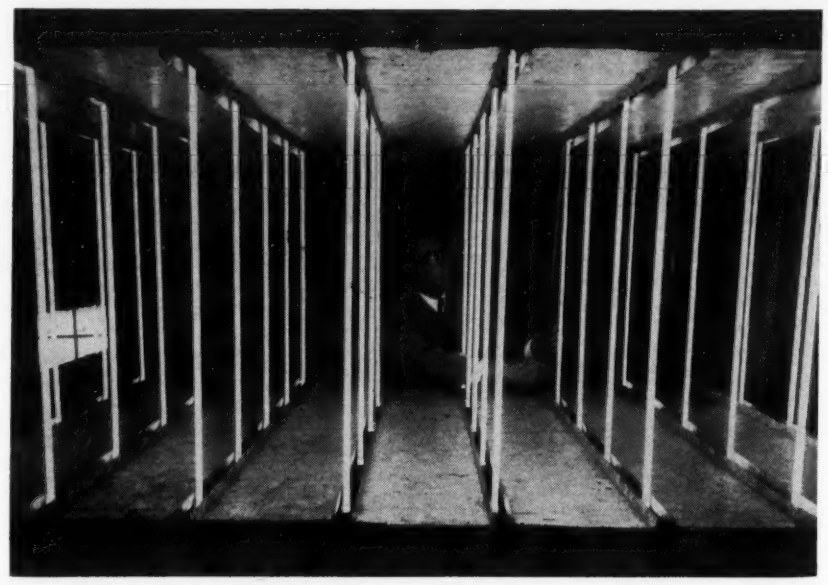
Lamps should be installed in a straight section in order to utilize the radiation on the bacteria before they reach the lamps and after they pass. While the effect of radiation on organisms diminishes with distance, nevertheless the effect is cumulative. In many cases a long straight length is not always available; however, the minimum straight portion of the duct should be at least twice the length occupied by the lamps.

During their studies, the research engineers verified the reciprocity law as applied to the action of radiation on bacteria when they learned that the bactericidal action is determined by the amount of radiation to which bacteria are exposed, whether a high intensity is applied for a short time or a low intensity for a correspondingly long time, provided that the product of the intensity times the exposure time is the same.

To prove this, a condenser discharge was passed through a lamp to produce a high intensity of ultra-violet radiation for only a few microseconds duration. This was found to have the same bactericidal effect as when the same total amount of effective radiation was applied at a low intensity for as much as several hours at room temperature.

From this they concluded that even though the exposure of bacteria to radiation in a duct will necessarily be of short duration, it is both practical and economical to provide sufficient intensity to obtain the total quantity of radiation required for their destruction.

Sterilamps in Air Conditioning



Westinghouse "Sterilamps" 30 inches long are mounted on 10-inch centers to kill air borne bacteria traveling through air conditioning system serving the company's auditorium at East Pittsburgh, Pa.

West Coast Society Hears Talk on Sound Control

SAN FRANCISCO—Clark Wayland, vice president and sales manager of Western Asbestos Co., spoke to members of the Air Conditioning Society of San Francisco on "The Importance of Sound Control in Today's Building and Mechanical Field" at the organization's luncheon meeting here Jan. 25.

Reno Works and Plays In Air Cooled Comfort

RENO, Nev.—Realizing that its patrons are liable to "get hot" in ways other than with a pair of dice, the Bank Club, said to be one of the largest and most elaborate gambling houses in the country, has installed air conditioning for their comfort.

Well over a thousand persons crowd the club nightly, playing roulette wheels, dice grames, poker, faro, and slot machines.

Air conditioning has paid dividends in Reno, where the Palace and the Fortune gambling clubs have also installed equipment to attract the profitable "divorce trade." Because people who come to Reno from all over the world have money and are accustomed to the best of everything, business establishments have found that air conditioning serves to draw an excellent class of trade.

CONDITIONING ADVERTISED

Air conditioning is featured in the advertising of the large gambling clubs, and front doors are left open for the purpose of sending an inviting stream of cold air into the street. Good showmen that they are, the club managers take every possible advantage of the advertising value of air conditioning systems.

There are only two banks in Reno, the Bank of America and the First National Bank, and both are equipped with air conditioning.

Hilp's Drug Store, operated by Lester Hilp, is an example of a business establishment that has found air conditioning to be definitely profitable.

Mr. Hilp reports that his air-cooling system has made possible the use of balcony space in the store, has increased the efficiency of employes, and has been a real factor in attracting trade. It is also possible to handle perishable candy during hot summer months.

Largest department store in the city, Reno branch of the J. C. Penny Co. chain, is equipped with a complete air conditioning system. Attracting the best class of trade in Reno—the store sells dresses up to $100—air conditioning has helped to attract and hold this type of business.

The Wonder Shop, specializing in ladies ready-to-wear, has found that air conditioning encourages customers to buy more clothes during the summer months. Because the average woman does not like to buy clothes in a hot, sticky atmosphere, the management has found that she will put off buying unless air conditioning has been installed.

All three of the Reno theaters are equipped with air conditioning.

Largest Synchronous Motor Serves Radio City Cooling System

NEW YORK CITY—The largest known synchronous motor powered from a city network for air conditioning use is the 1,000-hp. Westinghouse motor which has been placed in operation in the new International building in Rockefeller Center here.

Operating at unity power factor, the 1,200-r.p.m., three-phase, 60-cycle, 208-volt motor drives a 4,300 r.p.m. Carrier centrifugal compressor. The noise level of the units was 83⅓ decibels during tests. This result becomes more significant when compared with the average sound levels of a typewriter, 72 decibels; an ordinary conversation, 62 decibels; and heavy street traffic, 90 decibels.

Minimum vibration and noise were secured through special design. To illustrate the degree of manufacturing accuracy, the coupling, a fractional part of the rotating element, was pressed on the motor shaft while under construction to balance it accurately and dynamically along the rotor. A steel hood enclosing the back of the motor frame further reduces noise.

In choosing motors for air conditioning of large buildings, a noticeable trend is toward synchronous motors in large sizes. At full load the synchronous unit is said to be 1½% more efficient and costs 10% less than the wound type motor. This motor is a two-bearing machine flexibly coupled to the centrifugal compressor.

Since the locked rotor or starting current at full voltage is 9,500 amperes, it is necessary to reduce this value to the set limit. The control keeps the current additions within this value and timed to permit the regulator to restore the normal voltage.

The control, essentially a bank of resistors with relays and contactors, is timed and proportioned to limit the current increases and the intervals between additions.

The motor is first connected in series with the full bank of resistors, limiting the total current drawn from the line to 3,160 amperes. After a predetermined time interval, sufficient to allow the regulator to restore normal voltage, the first section of resistance is shorted out of the circuit, and at this stage 3,000 amperes are drawn from the line.

Again the regulator restores common voltage, and the second step of resistance is short circuited, with 2,800 amperes drawn from the line at this time. At a later interval, the motor comes completely up to speed, is placed directly across the line and the field is excited. The motor is now synchronized and in regular operation.

During this starting sequence, the motor is gradually brought to synchronous speed, with a consequent in addition to the starting sequence, falling off in current drawn from the line. Reduction from this cause, results in the final decrease to full load current of 2,160 amperes.

Menden Appointed N.Y.C. Manager For Airtemp

NEW YORK CITY—B. M. Menden, formerly with Airtemp Construction Corp. in Detroit, has been named vice president and general manager of the Airtemp New York Co., Inc.

Before his transfer to New York, Mr. Menden had served the Airtemp organization continuously since January, 1936. Before that he was with York for four years.

As New York manager, Mr. Menden succeeds J. R. MacDonald, who recently resigned to accept a position with General Cable Corp.

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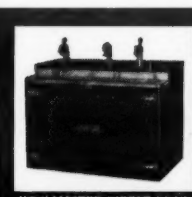
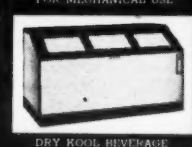
FOR Better Coolers

New catalog shows our improved line of Direct Draws, Dry Kool Beverage Coolers, Bottle Coolers, Walk-In Coolers and other refrigeration equipment. Dealers and distributors write to Desk 40 for catalog and particulars.



KOOLMASTER DIRECT DRAW FOR MECHANICAL USE



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MY JOBBER SAID

Yes!

I asked him if Virginia Quality Refrigerants were pure, if they were dependable, if I could always get quick service in the pinch. He said "YES."

That was a long time ago. I've been buying Virginia Quality Refrigerants from him ever since. And if you were to ask *me* those same questions *I'd* say "YES."

VIRGINIA SMELTING CO.
WEST NORFOLK, VIRGINIA

EXTRA DRY ESOTOO
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METHYLENE CHLORIDE

From 1/4 to 25 TONS of refrigeration

Brunner Refrigerating and Air Conditioning equipment comprises air and water cooled condensing units for practically all types of commercial applications up to and including 25 tons of refrigeration... Catalog promptly on request. Brunner Manufacturing Co., Utica, N. Y., U. S. A.

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DRI-X has high-drying efficiency and valuable neutralizing properties.

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How and When To Bring a Unit's Oil Charge To Its Proper Level

No Method of Determining Amount of Oil Carried Through System Other Than Checking After a Run

CHICAGO—How much oil should be added to a system to make up the proper oil charge, and when it should be added, were the factors in the servicing of "Freon-12" and methyl chloride refrigerating systems discussed by P. B. Reed, service manager for Servel, Inc., before the recent annual convention of the Refrigeration Service Engineers Society here.

"If it were practical to design a refrigerating compressor so that no oil ever left the compressor, the correct charge put in by the manufacturer would always be sufficient, no matter what the application," Mr. Reed explained.

"Unfortunately, this is not practical as the oil serves a useful purpose in sealing discharge and suction valves as well as lubricating frictional parts of the compressor," he continued.

"With the compressor in operation, the oil splashes up on the cylinder walls and although much of it is wiped off by the descending piston, part of it remains, some of which is mechanically forced over into the condenser and some of which is dissolved into the refrigerant and passes out of the cylinder with the refrigerant. As the pistons and cylinder walls wear, especially if the pistons are not equipped with rings, more and more oil will pass over into the condenser and circulate through the system.

FACTORS IN OIL ABSORPTION

"'Freon-12' and methyl chloride are readily absorbed by the mineral oils, the amount absorbed by contact with the gas depending chiefly on the temperature of the oil and the gas pressure. If the oil is cold it will absorb more refrigerant than if it is warm. It will also absorb more refrigerant if the gas pressure is high than if it is low.

"The amount of refrigerant absorbed into the crankcase oil varies according to the oil temperature and crankcase pressure. In a 'Freon-12' compressor, for example, which during the off cycle has cooled down to 80° F. with the suction pressure 30 lbs. per square inch, the crankcase oil will absorb 21% of its own weight of 'Freon-12,' while at 60° this figure will be 38%. To keep down this crankcase dilution one manufacturer uses a small electric heating element in the crankcase to keep oil warm on the off cycle."

When the compressor starts, Mr. Reed explained, there is an initial quick reduction of suction pressure, in a direct expansion system usually about 10 lbs. If the compressor is the open crankcase type the pressure on the oil will drop from 30 to 20 lbs. per square inch under which condition the oil will release about one-quarter of the refrigerant absorbed as the solubility will drop to 16% at 20 lbs. and 80° F.

This release of refrigerant is accompanied by foaming and turbulence resulting in oil slugging. To prevent this some manufacturers separate the crankcase off from the suction line and thus maintain the crankcase pressure during the starting period, allowing it to bleed off gradually to avoid this quick reduction in pressure. As the compressor continues to operate, the oil warms up to around 140° F. and the suction pressure drops to 10 lbs., under which conditions the solubility has dropped to 4%.

The action described thus is much the same for a methyl chloride system, although under the same conditions the amount of refrigerant absorbed into the oil is about one-half of that for "Freon-12."

"With a properly designed compressor and with the refrigerant coming back to the compressor in vapor form the solubility of refrigerant into the oil will cause no trouble, but there is a much different story if the refrigerant is allowed to come back to the compressor as a liquid. It will most certainly get into the crankcase along with the oil being returned from the evaporator and, being in liquid form it can and does mix readily with the oil in all proportions.

"It can be that there would be more liquid refrigerant in the mixture of oil and refrigerant in the crankcase than there is oil. This condition can also occur if the compressor is located where the temperature is lower than that of the evaporator, in which case the refrigerant in the evaporator will condense over through the suction line into the compressor, even to the extent of filling it with liquid refrigerant.

WHY LIQUID FLOODS BACK

"The return of liquid refrigerant to the crankcase is frequently caused by maladjustment of the expansion valve, a defective or incorrectly designed expansion valve, or improper location of the feeler bulb of the thermostatic expansion valve.

"If the evaporator is fully active there is no advantage in over-feeding the expansion valve to obtain increased suction pressure but the proper correction is to balance the capacities of the machine and evaporator at the desired evaporator temperature and suction pressure by increasing the area of the evaporator, or the rate of air circulation or decreasing the capacity of the condensing unit by slowing down the compressor, through bypassing, or some other such means.

"Usually, but not always, a cold and sweating suction line indicates that liquid refrigerant is present in the suction line. Best test, however, is the temperature of the cylinder casting. It should feel warm to the hand after the compressor has been running a few minutes. If it is cool to the hand, liquid refrigerant is getting into the cylinders."

WHAT FLOODBACK DOES

Mr. Reed then outlined the undesirable effects of the return of liquid refrigerant to the compressor.

It causes oil and liquid slugging, bringing about noisy operation and even breakage of suction and discharge valves, pistons, rods, and crankshaft.

It washes the oil from cylinder walls, pistons, rings, and valves, causing rapid wear of these parts.

It lowers the viscosity of the oil (its ability to spread out over and cling to metal surfaces), and consequently bearings, pins, etc. suffer from inadequate lubrication. As little as 5% "Freon-12" in 325 viscosity oil causes the viscosity to drop to 190, and the same mixture with methyl chloride causes an even greater loss of viscosity. Therefore, it is necessary to use an oil of initial high viscosity in order to have sufficient viscosity left for adequate lubrication.

VELOCITY A FACTOR

When the mixture of liquid refrigerant and oil is released into the evaporator from the liquid line the refrigerant vaporizes and leaves the oil, for the most part, still in liquid form.

The vaporous refrigerant is drawn back to the compressor and its passage through the tubing of the evaporator "drags" the oil along with it, the oil clinging to the inner wall of the tubing until it finally reaches the compressor and is returned to the crankcase.

The velocity of the vaporous refrigerant through the tubing in the evaporator largely determines how fast the oil will be drawn along and out of the evaporator, and the gas velocity is in turn determined by the size of the tubing, the refrigerant pressure and temperature, the design of the evaporator, and the balance between the capacity of the evaporator and the condensing unit.

IMPORTANCE OF VELOCITY

The velocity should be approximately 1,500 to 2,000 feet per minute for satisfactory performance of the evaporator and adequate oil return to prevent accumulation of an excessive amount of oil in the evaporator as the oil not only affects the boiling temperature of the refrigerant (as much as 2 or 3° above pure liquid refrigerant) but also acts as a partial insulator between the boiling refrigerant and the evaporator tube—that is, it lowers the thermal conductivity of the tube.

"Since some of the original oil charge in the compressor is 'enroute' throughout the system it is really 'lost' to the compressor," declared Mr. Reed. "The amount of oil 'enroute' will depend to a great extent on the amount of refrigerant added to the installation.

"It has been suggested that with 'Freon-12' one pint of oil be added for every 10 lbs. of refrigerant. Although this might prove sufficient on some installations, it would not on others and might result in too high or too low an oil level in the compressor after the amount of oil in solution in the refrigerant became stabilized.

"The percentage of oil concentration in the system outside of the compressor depends on several variables, and, for practical purposes at least, is not mathematically predictable.

WHEN TO CHECK LEVEL

"Therefore, it is neither possible for the manufacturer of the condensing unit to put in extra oil in the correct amount for all commercial refrigeration applications of the unit, nor is it sufficiently exact to add a fixed quantity of oil for a fixed quantity of refrigerant.

"How, then, are we to determine how much oil to add to the compressor to replace the oil that leaves the compressor and is 'enroute' throughout the system? Obviously, the answer is to add oil to the compressor until its level is brought back to the height the manufacturer has found best for successful lubrication.

"After the condensing unit is first installed," Mr. Reed explained further, "the compressor oil level will gradually become lower so that after an hour or two hours operation there will be a perceptible loss of oil from the crankcase and oil should be added to bring the oil level in the crankcase up to normal.

"After this, the rate of loss of oil from the crankcase will be much slower, but will continue until the percentage of oil in solution in the refrigerant has become stabilized.

"This usually occurs within 24 hours and if the oil level in the compressor is then checked and oil added as necessary, it is reasonably certain that the oil level in the crankcase will (exclusive of leakage) vary but little from then on. Some service engineers prefer to again call back after three or four weeks and again check the oil level.

"The above procedure may seem to require too much time, but most service engineers make it a practice of calling back the next day on a new installation anyway and it requires but a few minutes to check the oil level in the compressor. There appears to be no other sure way of determining just how much oil is required in a 'remote' refrigerating system using methyl chloride or 'Freon-12' or other refrigerants that are highly miscible with oil."

Pifer and Clemons Join In Partnership

DETROIT — Earl T. Pifer has entered into partnership with Charles F. Clemons in the management and operation of Clemons Motor Service, Inc. Mr. Pifer will head the new commercial motors division, which will operate a complete electric motor sales and service department.

Both men were for many years associated with United Motors, where Mr. Clemons was service manager.

N. Y. Refrigeration Guild Officers Elected

NEW YORK CITY—Theodore A. Reina of M. & R. Refrigeration Co. has been elected president of the Refrigeration & Air Conditioning Guild, Inc. for 1940. O. Forsberg of Beem Refrigeration Co. was named vice president; William F. DeSpagna of Commercial Refrigeration Co., secretary; Nat Meister, Frozen Air Service Co., treasurer; and F. A. Fagon, Rex Refrigeration Co., sergeant-at-arms.

Regional vice presidents for the year are: Brooklyn, A. Smith; Manhattan, R. C. Jones; Queens, T. E. O'Donohue; Bronx, H. Zysman; and Nassau, S. Molinari. On the board of directors are: S. Speilman, E. Condon, K. Bielfeldt, R. Randall, and W. Bennett. Joseph A. Dorsey, past president, has been named to the advisory board.

The guild is a membership organization designed to elevate the standard of service, maintenance, and engineering in refrigeration and air conditioning. Organized last year, its accomplishments include classification of insurance and the development of a friendlier feeling among refrigeration men, as well as improved relationships with jobbers and manufacturers.

Annual social meeting of the organization is being planned for mid-March, Mr. DeSpagna reports. Last year's affair, the organization's first, drew an attendance of about 500.

Barron Refrigeration Co. Changes Its Name

DALLAS, Tex.—Name of the former Barron Refrigeration & Radio Service Co. has been changed to Refrigeration & Radio Sales Co., and the company has moved to a new location, Arkard and Patterson Sts.

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What's New

Descriptions of some of the new items for the refrigeration and air conditioning trade, many of which were shown for the first time at the trade shows held last month.

New Valve By Henry Co. Works on New Principle

A balanced action diaphragm packless valve, called revolutionary in design, was introduced by the Henry Valve Co. at the All-Industry Refrigeration & Air Conditioning Exhibition.

While 24 features are claimed for the new product, 11 of them being called exclusive features, the principal one is the balancing action.

When the valve is opened the pressure below the diaphragms and above the valve stem is instantly released

through a balancing channel in the valve stem. Opening action is positive—the valve cannot "stick shut," regardless of differential in pressures above or below the valve seat.

Longer diaphragm life is claimed by the company because of the light weight spring, the non-rotating bearing plate in the upper stem, and four laminated puncture-and-fracture proof diaphragm construction.

In order to eliminate tube bending and to save time in installation, inlet and outlet ports are in line on two and three-way valves. The Ovaline handwheel, which provides a natural gripping surface, is another feature especially designed for the service engineer or operator.

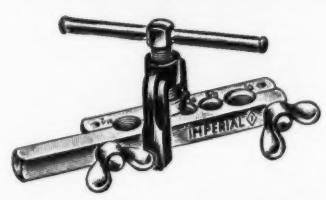
Other products introduced by the Henry Valve Co. included balanced-action diaphragm packless hand expansion valves and forged steel receiver valves. The hand expansion valves are for use in conjunction with solenoid valves or in by-passes around various types of automatic control valves.

Imperial Tool Designed To Speed Up Flaring

Faster operation and easier handling are two advantages claimed for the new tool for flaring copper, brass, and aluminum tubing which has just been announced by Imperial Brass Mfg. Co. The tool is designed for use in making up standard S.A.E. flare connections.

Special feature of the tool is its yoke, which is made so that it can be slipped directly over the bar without twisting or turning. This has been accomplished by slotting the inside edge of the yoke so that, once in position, a slight turn holds it in place.

Construction of the bottom of the yoke, it is claimed, makes it possible



to make flares even when there is little space between flare nut and end of tubing. This is said to be especially advantageous with fin tubing. The yoke is of forged steel construction.

Two sizes of tools are offered, No. 193-F for handling tube in 1/16-inch sizes from 3/16 to 1/2-inch O.D., and No. 195-F for handling tubing from 1/4 to 5/8 inch in the same gradations.

'Extra' Features Mark New Cutler-Hammer Controls

A number of optional features have been added by Cutler-Hammer to its line of commercial refrigeration control equipment. These include manual cut-in, cold control knob, external cut-out adjustment, single pole double throw contacts, manual cut-in for dual controls, and on-off knob.

The manual cut-in feature can be furnished only with type H (high pressure cut-out) and type TX (temperature type arranged for reverse operation). In operation, contacts open automatically at the high pressure or low temperature cut out setting, but can be closed only by manual operation of the cut-in pushbutton.

Cold control knob can be furnished on all pressure and temperature controls, and provides a limited, external nine-point adjustment of both cut-in and cut-out settings, plus an "off" position.

External cut-out adjustment, also available on all type pressure and temperature controls, provides a limited adjustment of the cut-out setting only, without affecting the cut-in setting.

Single pole double throw contacts, obtainable on both pressure and temperature controls for pilot circuit control only, provides closing of one circuit in the cut-in position and the other circuit in the cut-out position.

On dual controls, the manual cut-in feature can be furnished only on the high pressure cut-out side, and cuts out this side automatically but can be reset only by manual operation of the cut-in pushbutton.

On-off knob is obtainable on all type pressure and temperature controls except those arranged for reverse operation. Function of this switch is simply to shut down the equipment by opening the motor circuit.

Pressure type controls for beverage coolers and ice cream cabinets also have been introduced in both one-knob and two-knob models for use with sulphur dioxide, methyl chloride, and "Freon" refrigerants. Both types of controls are available either with or without thermal overload protection, and have 10-point adjustments.

Another recent addition to the Cutler-Hammer line is a general purpose pressure control, without overload protection, for a variety of small commercial applications. This control can be mounted either vertically or horizontally, and has 10-point pressure adjustment. A variety of domestic refrigeration replacement controls also is offered by the company.

Muncie Gear Making Two-Zone Cabinet

Private quick freezing and cold storage facilities for farms, homes, and business places is provided by the "Zero-2-Zone" two-compartment refrigerator unit introduced by Muncie Gear Works, Inc.

Self-contained, and resembling the conventional beverage cooler in exterior appearance, the dual-temperature unit is of the top-opening type. Only one of the two compartments is refrigerated, the other being served by the cold air from the first compartment spilling over into it.

Refrigerated compartment has a food storage capacity of 7 cu. ft., while the other section has a capacity of 5 cu. ft.

In the "zero" compartment, refrigeration is accomplished by plates at the top and bottom, through which the refrigerant ("Freon") is circulated. This method, it is claimed, prevents change in temperature of this compartment when the door to the section is opened. In the laboratory tests, the door is said to have been left open for 30 minutes with but 3° change in temperature in the compartment.

Special swivel hinge on the top plate permits lifting of this for storage or removal of frosted foods. Use of plates instead of coils for cooling is also claimed to do away with the necessity of defrosting the unit. Frost accumulation on the plates may be scraped off easily without melting or change of temperature, it is said.

Freezing of ice cubes may be done on the section between the top plates and the lid of the zero compartment. Extra-fast freezing is claimed, and it is also said that trays do not stick to the plate surface.

Served by the spill of air over the zero compartment, the second or normal storage section of the unit is kept at a temperature above freezing, it is claimed. In this section may be stored beverages or foods at normal temperatures, and frosted foods may be stored here for thawing before use.

Temperature of either section may be controlled to meet varying storage requirements, it is claimed. The case is served by a refrigerating unit of 1/4-hp. capacity.

Alco Introduces New Back-Pressure Regulator

A new line of evaporator pressure regulators and a new solenoid valve were introduced by Alco at the All-Industry Show. Improved design and simplicity of construction are claimed as characteristics of the evaporator pressure regulator line.

Regulators have been designed to accurately maintain constant evaporator pressures regardless of sudden load changes or fluctuations in suction pressure. They may be used on either single or multiple systems equipped with any standard liquid refrigerant control, such as float valves, thermo valves, etc.

Particular attention has been given to performance at very light loads and, by the combination of adequate control stability and the use of a

gradually opening port, chattering and fluttering have been eliminated, it is claimed.

All sliding parts have been eliminated from the pilot, which is said to insure the maintenance of the selected evaporator pressure at all times.

A minimum operating differential of 2 lbs. between evaporator and suction pressures is sufficient for proper operation of the valve, it is claimed. The established Alco principle of removable valve cages has also been employed in the design of the evaporator pressure regulators. Entire valve seat and poppet assembly, i.e., the valve cage, is replaceable without removing the valve proper from the line.

Regulators are equipped with two separate removable strainers, one for the pilot circuit and one for the main valve. Valve stem and operating piston, the only moving parts subjected to sliding service, are made of high grade stainless steel.

All regulators are equipped with manual opening stems and are designed for use with any refrigerant. The units will be offered in port sizes from 3/4 to 2 inches and a large variety of connection sizes.

Alco has also added to its line of waterproof magnetic valves the Type S2, a packless, pilot operated piston type stop valve for use with "Freon," methyl chloride, brine, water, gas, air, and steam.

An extra powerful solenoid is provided which requires no fusetron protection. This coil will not overheat or burn out even with the valve blocked in the closed position, it is claimed.

Waterproof coil and leads are said to eliminate failure due to condensation of moisture when the valve is installed in low temperature or high humidity rooms.

Merit of these waterproof coils was demonstrated by means of a special test, started July 14, 1938, in which two valves were in actual operation even though the valves and coils were completely immersed in water. Started in the Alco experimental laboratory, the test, with these same valves, was transported to the First All-Industry Exhibition in January, 1939 and made a return appearance at the second show.

SERVEL *Silver Fleet*

Smooth and silent as a sailboat, Servel's "Silver Fleet" refrigerating machines offer you a standard of operating efficiency that is 3 to 5 years ahead of the field. Ask for the new 72-page catalog. Servel, Inc., Electric Refrigeration and Air Conditioning Division, Evansville, Ind.

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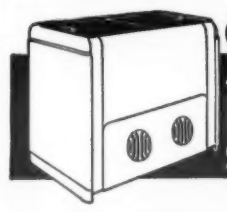

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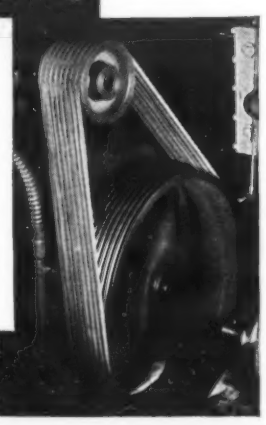

THE MANHATTAN RUBBER MFG. DIVISION
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What's New (Continued)

Marlo Has Multi-Stage, Slotted Cooling Coil

Newest model in the line of air conditioning coils being shown by Marlo Coil Co. is a multi-stage, slotted coil. Big feature of the new coil is the space between the sections which facilitates cleaning. The arrangement also gives an improved thermal performance of the surface, it is claimed.

In the line of Marlo low temperature electric defrosting units, the units are made for use with any refrigerant, and it is said that room temperature can be maintained within 10° F. of any refrigerant temperature.

The low temperature units consist of an insulated steel housing, containing the cooling coil, the motor and fan with automatic air-stream shutters on both air inlet and outlet. Two-speed motors are used to permit lower air volumes and resultant velocities within the room during loading and unloading of the room when occupancy is necessary.

Cabinet is of insulated steel. Louvers are automatic, and motor and fan are mounted on a removable frame. The fin coil assembly features a cross-over of refrigerant circuit. Safety defrosting cutout is located within the cabinet and is set at 100° F. The heating element in the unit is of nickel-chromium alloy, with magnesium oxide electric insulator and heat conductor. Element has a seamless steel tubing, hermetically sealed. Heating elements are encased in lower row of tubes of coil assembly. Manual or automatic defrosting is available with the units.

The low-temperature units are especially adaptable to ice cream hardening rooms, it is said.

'Light Duty' Polartrons Flexible In Application

The new "series 40" light duty Polartrons introduced by Minneapolis-Honeywell Regulator Co. at the All-Industry Refrigeration & Air Conditioning Exhibition may be used to control refrigeration compressor motors under 1 hp. or larger sizes if used to pilot a magnetic starter.

These new controls embody all of the features of the heavy-duty type Polartron including the M-H claim of "frost free constant cold control" of refrigeration coils, and independent adjustment of "on" and "off" suction pressure. The new small model is "streamlined" in design.

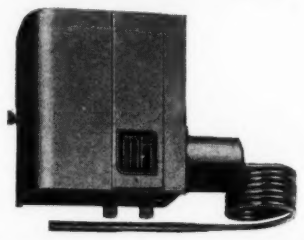
Models are available for "low side" or both "low and high side" pressure control. A small pilot relay easily inserted in the Polartron case may be attached in the field, if desired, to permit room for thermostat control of refrigeration. This provides a flexible arrangement, and permits the addition of thermostatic control at any later date.

Simplicity of operation is another feature claimed, one moving lever transmitting the pressure changes directly into switching action. Accuracy is attained through the proper choice of lever ratios and spring rates so that slight variations in these two factors do not affect calibration.

Switching mechanism is a newly designed snap-action non-magnetic switch, compact and sealed.

Separate adjusting dials (calibrated if desired) are supplied for "on" and "off" suction pressures. These dials, however, are under a separate cover to discourage unauthorized tampering.

A special auxiliary "cooling control lever" is furnished with each Polartron which, when attached, will



permit limited regulation of the fixture temperature by the operator. M-H officials claim that except for heavy-duty Polartrons, this is the only pressure control that has separate adjustments of both the low pressure "cut-in" and "cut-out" pressures.

These controls are universal for all non-corrosive refrigerants, and provide their own pressure connections. The P420 Polartron has a remote copper pressure line for the low pressure connection, consisting of a 3-ft. capillary tube with a 3-inch length of ¼-inch o.d. copper tubing. Connections can be made either by soldering directly into the line or by using a ¼-inch S.A.E. flare fitting.

The copper pressure line is coiled up in small loops to facilitate making short connections.

Mueller Brass Offers New Special Accessories

Several new fittings and accessories for refrigeration and air conditioning use have made their appearance in the Mueller Brass Co. line.

First of these is the defroster valve, a device used to protect an evaporator against excessive pressure during defrosting, when defrosting is accomplished by applying heat to the evaporator. It also is used to protect such equipment as direct expansion aerators, ice cream freezers, etc. when steam is used for cleaning.

A small non-adjustable relief valve is built into the stem of a standard Mueller diaphragm valve, to open with about a 45 lb. per sq. in. pressure difference between the inlet and outlet of the valve. When an evaporator is being defrosted, the valve is closed manually by means of the hand wheel.

Even though considerable liquid refrigerant is trapped in the coil and heat applied for defrosting or cleaning, the pressure in the coil cannot rise to a dangerous point, it is claimed. The pressure will be relieved into the suction line as soon as it reaches the setting of the valve. A suction line service valve is not necessary in addition to the defrosting valve, it is claimed.

Forged brass manifolds also have been added to the Mueller line, the manifold bars having integrally forged mounting brackets to assure a rigid assembly. Manifold bars are made in two sizes, with either two or three tapped outlets, enabling a variety of manifold assemblies. Either threaded or soldered connections may be used. If a large number of valves are manifolded, provision may be made for the refrigerant to enter at the center of the assembly.

The "Fil-Trap," a large capacity cone screen filter, is new in the Mueller line. Cone screen is filled with pure wool, and has an area of 10 sq. in. Installed vertically, the Fil-Trap keeps small particles of filter accumulation from falling back into the line.

Added to the heat interchanger series is the "IC" unit, designed primarily for installation in self-contained ice cream cabinets or other similar units where space is at a premium.

Another new unit is a "pulsation dampener," which is used chiefly to protect gauges, pressure-actuated water valves, pressure cut-outs, etc. from pressure surges. In use, the fitting is installed at the most convient point in the line between the pressure source and the instrument to be protected.

A fine-thread restriction screw is assembled into the body of the fitting, leaving a long, fine spiral passage between the inlet and outlet. This restricting passage is such that the pressure will be registered accurately, without pulsation, it is claimed.

Outlets of Mueller "Streamline" wrought copper tees are now protected by paper board caps, to prevent dirt or foreign particles from entering them before they are installed, and to protect the solder cup against distortion.

Streamline copper tubing is now solder sealed, to keep it free from dust, filings, etc. Each end of the pipe length is sealed by a copper cap soldered into place. To remove the cap, it need be touched with the flame of a blow torch or gas tip. The cap may be used again to reseal cut lengths of pipe.

American Brass Tubing Has Cup-Sealed Ends

A single unbroken coil of cold drawn seamless copper capillary tubing, .075-inch O.D. by .020-inch I.D., 3,500 feet long and weighing 55 lbs., highlighted the display of the French Small Tube branch of American Brass Co. at the All-Industry Refrigeration & Air Conditioning Exhibition at Chicago.

Also shown by this branch of the company were copper dehydrated refrigeration tubes with new cup sealed ends, which are claimed to provide a 50% saving in end scrap when the tubes are installed. Display boards showing intricately formed, swaged, and expanded tubes of copper and brass also were exhibited.

American Metal Hose branch showed vibration eliminators for use with air conditioning machinery, flexible brass refrigeration tubing conduit, and flexible refrigeration charging lines. Copper tubes for assembly with solder and flared tube type fittings also were on display.

Greulich Joins Staff Of 'Air Mover' Firm

DETROIT—George Greulich, formerly associated with the Timken Silent Automatic and Bendix organizations here in a managerial capacity, has joined the national selling organization of the J. L. Skuttle Co.

Mr. Greulich is engaged in marketing the Skuttle "Air Mover," which is used to apply oil, gas, and coal burning space heaters to more than one room of a residence or small commercial building.

The Air Mover is installed directly above the space heater and by means of a dual sirocco type fan, powered by a 1/30-hp. motor, it conducts 200 c.f.m. to one or two other rooms. Retail price of the new unit is $32.50 f.o.b. Detroit.

Brock Heads James Sales

ST. LOUIS—A. J. Brock has been appointed general sales manager in charge of appliances at James & Co., General Electric distributor in this area. Mr. Brock was formerly manager of the G-E Home Bureau.

G-E Supply Moves St. Louis Office

ST. LOUIS—General Electric Supply Corp. is moving its local headquarters to a new location at 2653 Locust St., where two full floors and a basement containing a total of 45,000 sq. ft. of floor space will be utilized for offices and warehousing.

A. H. Shirley is district manager; L. C. Arnold, district appliance sales manager; G. L. Ralston, district supply sales manager; A. S. Dietz, district auditor; and E. A. Heggi, district service manager.

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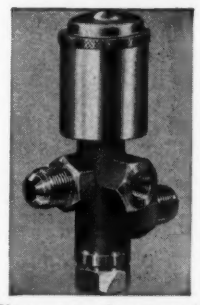

With Built-in Check
Two Temperature—Automatic
Ideal for Multiple Systems—Shuts off tight.

These valves are used to control the warmer coils in multiple systems. They are adjustable between 20 in. vacuum and 40 lb. pressure. In operation they will maintain coil pressures within a 2-lb. differential at any setting within the range. They are best used when temperature differences are not too wide and where a constant pressure is required in the coil controlled.

They are frequently installed on walk-in boxes which are operated by the same compressor as the counters in meat markets. In this application the temperature of the counter controls the compressor and the two temperature valve keeps the walk-in box at a constant temperature avoiding low pull-down due to the fact that this box is not opened as often and does not have the heat loss of the counter.

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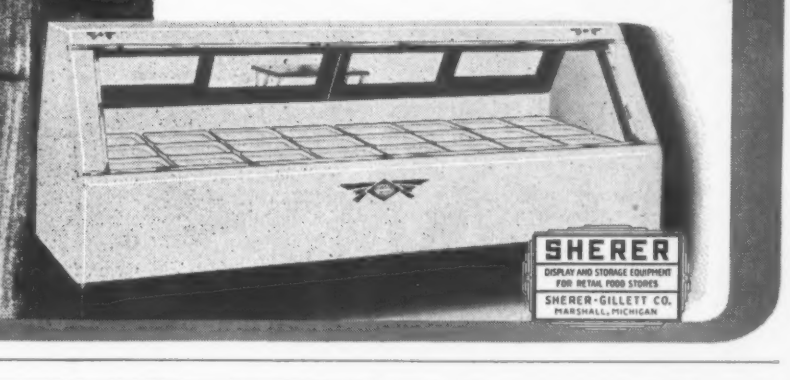

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World's Largest Manufacturer of V-Belts

WILSON BOTTLE STORAGE
- TRIPLE PURPOSE -

1. Aeration of Milk — with refrigerated brine from the central compartment
2. Storage of Milk — in the two adjacent dry storage compartments
3. Making of Ice — for use on the delivery route, if desired

Three-in-one: This Bottle-Storage Cooler, with aerator and pump, makes a complete cooling and storing unit for the small retailer. For the large retailer WILSON SYSTEMS provide the Wilson Sectional Walk-In Storage Coolers in 18 stock sizes, with brine tank, aerator and pump.
GET YOUR FULL SHARE OF ALL MILK-COOLING BUSINESS
WRITE FOR DETAILS
WILSON CABINET CORP.
SMYRNA DELAWARE

Looking for a
TRAINED MAN?
Call on the U.E.I. Placement Bureau for a trained, reliable, competent worker. For over 12 years U.E.I. trained men have been making good employees for all positions requiring technical knowledge or mechanical ability. Remember, the U.E.I. Placement Bureau Service is FREE to you and your prospective employee. Try it.

UTILITIES ENGINEERING INSTITUTE
404 N. Wells St. *Est. 1927* Chicago, Illinois

For Information on Motors
FOR ALL TYPES OF
Air Conditioning and Refrigeration Equipment
WRITE TO
Wagner Electric Corporation
6441 PLYMOUTH AVE ST LOUIS MO

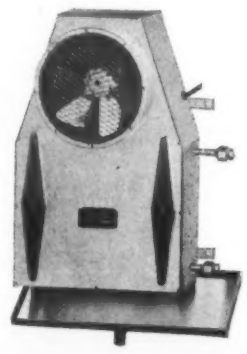
Chieftain Chapter 1
THE HERMETIC STORY
Chieftain led the industry in making quality built, correctly priced, conventional units available to manufacturers. Again they lead in offering hermetics of proven superiority and correct price to the industry. WRITE FOR THE FULL STORY.
TECUMSEH PRODUCTS CO., TECUMSEH, MICH.
Canadian distributor: Refrigeration Supplies Co., Ltd., London, Ontario

HENRY ABSO-DRY Pressure Sealed... DRYER
Hear 'Em Hiss-s-s-s!
TYPE 712

Most efficient because of the exclusive Henry vacuum drying and pressure sealing process. Escape of dehydrated air when seal cap is removed proves unit is absolutely dry! Soldered brass shell with dispersion tube and dehydrant compression spring. Choice of 4 dehydrants.
WRITE FOR CATALOG
HENRY VALVE CO. 1001-19 N. SPAULDING AVE. CHICAGO, ILLINOIS
STOCKED BY LEADING JOBBERS

MILLS
COMPRESSORS
for Commercial Use
Mills Novelty Company • 4100 Fullerton Avenue • Chicago, Illinois

No More Lost Replacement Sales With
Gilmer's "Eye-ful" Tower
BELT MERCHANDISER WITH HANDIMETER!
Your "On-the-counter" F.H.P. Belt Department that pays you almost $1.00 an inch PROFIT for the 15"-circle space it occupies!
Write *today* for details
L. H. GILMER COMPANY
TACONY PHILADELPHIA

LARKIN COILS
WALL HUMI-TEMP UNITS
You Will Increase Your Profits
One Customer Sells Another
Units For Every Need
Today—See Your Jobber or Write Direct to
LARKIN COILS. INC. General Offices and Factory
519 Fair St., S.E., ATLANTA, GA.
Originators of the Cross Fin Coil.


A tight system calls for
FITTINGS THAT WILL STAY TIGHT
IMPERIAL S. A. E. flared fittings have been setting a mighty fast pace in the air conditioning and refrigeration field . . and their rapid acceptance by installation and service men is based on *results*. Imperial fittings are tight when the job is finished and they *stay* tight.
Write for catalog covering complete listing of sizes and prices.
IMPERIAL BRASS MFG. CO., 565 S. Racine Ave., Chicago

S. A. E. FLARED FITTINGS
Brass forged nuts, tees, elbows and crosses — will not crack. Heavier and stronger than standard—non-porous—no seepage or season cracking. Tees and elbows have flats for wrench.
IMPERIAL *Fittings* ORDER FROM YOUR JOBBER
VALVES •• TOOLS • CHARGING LINES • FLOATS • DEHYDRATORS • STRAINERS

Department Stores Eye Growth of Instalment Sales

Competition Among Loan Agencies Is Threat To Whole System, Stores Hear

NEW YORK CITY—Selling on the instalment plan—particularly by department stores, will continue to grow as times get better, but with the growth of this type of selling will come a need to educate the public on how to use such a plan without going too deeply into debt.

Such was the trend of thought expressed during the sessions of the Credit Management Division of the National Retail Dry Goods Association convention held here recently. The department stores, long experienced in retail credit problems, welcome instalment selling as a business builder, but are also aware of some of the dangers involved.

Speakers were J. A. Livingston, economist of Business Week, New York; Rolf Nugent, director of the Department of Consumer Credit Studies of the Russell Sage Foundation, New York; and P. I. Caplan, C.P.A., controller of Sterling, Inc., New York.

It was emphasized that unless general business turns downward the current expansion in instalment selling will go ahead of the high records of 1929 and 1937. A warning note was sounded to the effect that the increases in instalment sales may require increasing controls in order to check possible adverse economic and social consequences.

Mr. Livingston, in his address, estimated that department store instalment sales during 1939 were 10 to 15% ahead of the 1929 figures, despite the fact that instalment selling generally is down one-third from the 1929 totals. The department stores of the country, Mr. Livingston asserted, are fighting to get the business they have lost on the whole, and instalment selling is the device they are using. Department store sales are likely to double during the next five years, Mr. Livingston continued, but "worrying about the coming expansion will not do any good. It's going to go on anyway. The gun is cocked and the trigger's about to be pulled.

THE COMPETITION

"The department stores have gone into instalment selling to get business," the speaker said, "and I think that in years to come the drive for business is going to become even more intense. As long as people go out and borrow on personal notes at banks, or borrow directly from industrial banks, or from personal finance companies—they have a choice. They can go to department stores to buy their refrigerators and their furniture, or they can go elsewhere.

"Yet you want to keep them coming into your stores. You don't want them to have a choice. You want to keep them in the family. But the more agencies competing with you in the extension of instalment credit, the harder becomes your job to wed customers to your store.

"But you've been doing a darn good job in spite of all competition. Your instalment sales have grown while your dollar sales have dropped. In 1938 instalment sales of department stores declined—as is to be expected with a sharp drop in general business. But during 1939 they picked up again. I haven't the final figures, but I wouldn't be surprised if they were some 10 to 15% ahead of what they were in 1929. And that is a spectacular showing—in view of the fact that instalment selling as a whole is down 33% from 1929.

STORE TERM SALES GAIN

"Since 1929 instalment sales of department stores have outstripped in volume the sales of any other type of store—furniture outlets, jewelers, automobile dealers, household appliance dealers, and miscellaneous stores. I wouldn't be surprised the least if we talked about the '40's as the start of a boom in department store instalment credit."

Mr. Nugent believes that the pressure of credit sales is taking an increasingly heavy social toll and cited several steps which might make the easy payment plan less hazardous for the American family. Included were better training in family finance in the public schools, improvement in the practice of credit granting agencies, better facilities for credit clearance, giving a comprehensive community picture of the indebtedness of a credit applicant, and the creation of facilities for adjustment in cases where families are heavily in debt.

"Everyone has much to gain from any device that will contribute to business stability," Mr. Nugent stated. Perhaps some sort of voluntary association of credit granting might be able to bring about a greater degree of stability in consumer credit. But I am inclined to believe that voluntary agreements would break down under the competitive pressure of those who would not be bound by them. The most violent movements occur in the financing of automobiles, refrigerators, and other durable goods for which funds come largely from commercial banks.

ASK RESTRICTIONS

"I have proposed that it might be found desirable for the Federal Reserve Board to restrict the use of bank credit to instalment contracts which meet conditions of down payment and maturity. There can be little doubt that variations of instalment terms for such goods would have a substantial effect upon outstanding amount of consumer credit.

"Those who have viewed with alarm the growth of consumer debt during the last few decades have generally misunderstood the true nature of this phenomenon. Unfortunately the word 'debt' carries the wrong connotation. The individual items that make up the total amount of consumer credit at any one time do not generally represent promises to pay for a lot of dead horses. On the contrary, most of the horses are very much alive, supplying transportation, refrigeration, and entertainment, or lightening the burden of housekeeping for the obligor.

OLD POLICIES DISCARDED

"But even after this explanation has been made, one can scarcely view current tendencies with entire equanimity. The number of agencies through which consumer credit is offered has been increasing daily. Hundreds of commercial banks have recently entered the field and are striving for volume in competition with existing agencies. Competition in credit selling has driven some merchants to give up long-established cash policies and others to convert their credit facilities into an active force for sales promotion.

In detailing his suggestions as to "What can be done to make the easy payment system less hazardous for the American family?" Mr. Nugent set forth the following:

"The first and most important job is to bring about a greater degree of stability in the economic system as a whole. The most serious hazard in the expansion of consumer indebtedness is the impact of unstable incomes upon an increasing amount of fixed payments in family budgets. In this respect the two problems which I have undertaken to discuss are interrelated.

TEACH THE FAMILY

"The second job, I believe, is better training in family finances. The public school system has shown the need for adequate medical and dental service and has created the desire for high standards of living without showing how these things can be obtained on limited incomes. Courses in family financial management are gradually being introduced into public school curricula. But much remains to be done. The available family budget systems continue merely to balance cash income against cash outgo and none that have come to my attention provide facilities for the refined accounting that is necessary to accurate family budgeting under modern conditions.

"A third is to improve the practices of credit-granting agencies. Instalment credit techniques lend themselves readily to fraud and abuse and there has always been a disreputable fringe of credit selling and cash lending agencies.

"But criticism of credit practices does not stop with the unethical fringe. Misleading statements of credit charges are common among many of our most respected institutions. Advertisements of personal loan departments of commercial banks are among the most deceptive. The phrase 'banking rates,' which most people would take to mean 6% interest, has been used to describe contracts on which true interest rates approximated 24% if paid according to contract, and much higher rates if the contract were renewed or if payments were delinquent. I have the greatest sympathy for the cause of the Federal Trade Commission in its recent effort to prevent misrepresentation of the charges of finance companies. But it seems ironic that this aggressive action by one government agency should be accompanied by complete indifference of the Comptroller of the Currency and other Federal supervisory agencies to far more reprehensible advertisements of institutions that are directly under their control.

"Consumer credit is necessarily expensive. In formulating the Uniform Small Loan Law, the Russell Sage Foundation has adhered to the policy that although it was necessary to authorize relatively high rates of charge, these charges should be so expressed that no applicant would be unaware of the true interest burden he would assume by borrowing and that the rate of charge could not be accelerated in any event.

"Finally, and certainly not least important, it seems essential to create facilities for adjustment in cases where families are head-over-heels in debt. Under such circumstances expensive collection pressure succeeds only in creating additional family stresses. The use of court process gives relief only to the creditor who get there first and usually weakens the position of all others.

"In many instances complete write-offs would be the best solution, not only for the families of the debtors and for the social agencies to whom problems of credit indigestion are passed, but also to the creditors themselves. In other instances, partial write-offs would restore the family's ability to pay. It seems probable that such adjustments would not increase losses and might even decrease them. At least, they would avoid collection effort that had no hope of success."

Mr. Caplan's topic was "The Expansion of Soft Goods Instalment Sales," and he advised that repossession clauses be retained, and further that "you should be wary of the customer who suggests its cancellation."

PENN AUTOMATIC CONTROLS AND SWITCHES
Protect the reputation of your product
Write for Catalog
PENN ELECTRIC SWITCH CO.
GOSHEN, INDIANA

A COMPLETE LINE OF COMMERCIAL REFRIGERATORS AND DISPLAY EQUIPMENT
STAINLESS STEEL

GLOEKLER MANUFACTURING CO. ERIE, PA.
WRITE FOR OUR NEW CATALOG

GET PEAK PERFORMANCE with SPORLAN
Controlled Performance SPORLAN VALVES

Use CHICAGO SEALS
for seal replacements
A complete line in all sizes

CHICAGO SEAL CO.
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DISPLAY CASES
Write for details of this sensational new 100% PORCELAIN Display Case line.

MIDWEST MFG. COMPANY
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ACME INDUSTRIES, INC.
JACKSON MICHIGAN
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Tests Prove it's *Completely Waterproof.*
The New SI
Small Capacity
MAGNET VALVE
Alco Valve Co., St. Louis, Mo.

Small Town Dealer Disproves Some Theories About the Farm Market

Farmers Buy High-Price Appliances, But He Had To Get a Trailer To Show Units To Them

FREEMONT, Ind.—When farm families start out to buy major appliances, they consider refrigerators first, washers second, and ranges third. That's the sales experience of the Snyder Super Service Station in the newly electrified rural areas adjacent to this town of 800 population.

After selling 50 refrigerators and 100 radios in four years with no other effort than displaying one refrigerator and four home and car radios in one end of his accessories showroom, Mr. Snyder, owner of the station, decided that this business was worth going after.

FANCY SHOWROOM 'OUT'

His four-year experience had shown him that people were attracted by the refrigerator itself, more than how or where it was displayed. The fact that the "showroom" in this case happened to be a filling station didn't seem to make a bit of difference.

So, to start his active sales program, Mr. Snyder bought a standard 18-foot house trailer, equipped with cabinets, drawer space, sink, etc., and set it up as a sample miniature home, parking it at one end of the filling station lot. Into the trailer he put one large and one small refrigerator, an electric range, and a washer.

On the first day he operated the trailer display, more than 50 persons visited it. In a few days he had sold four refrigerators, three ranges, a washer, and three radios—and obtained the names of 100 A-1 farm prospects, soon to be connected to Rural Electric Membership Corp. lines. Small two-column advertisements in local papers drew even more visitors—most of whom Mr. Snyder converted into owners, or prospects.

For a few weeks, the trailer was a permanent part of the filling station arrangement. It wasn't even parked in a garage at night—Mr. Snyder just locked it up with a heavy chain.

WHAT A TRAILER DID

Then Mr. Snyder took his trailer to the highways, to ferret out and follow up farm prospects. First day out he sold a refrigerator, a washer, and a vacuum cleaner to one family—for cash. This sale couldn't have been made without the trailer demonstration, for the housewife was about 75 years old, seldom left her home, and wasn't impressed by pretty pictures. She wouldn't go to see the equipment—but bought readily enough when the equipment was brought to her.

Mr. Snyder's gross profit on trailer sales for his first six weeks of operation was $400. He handled all this business himself, as a part-time occupation aside from his regular filling station duties. He is his only salesman—and he gets list prices, except for a small discount for cash where two or more units are purchased and installed at the same time.

DEALERS MUST WORK

In his opinion, dealers in small towns should do their own selling. Since sales are apt to be rather few, salesmen working on commission in such territories tend to over-sell prospects, cut prices to land an occasional order, or make over-allowances on trade-ins, he believes. Then, too, they may take a chance on credit risks that the dealer himself would think a long time before accepting.

There's nothing to this "volume stuff," Mr. Snyder says, if it has to be obtained by forced selling via the discount route. If you can keep your upkeep **down,** and profits **up,** you'll get along better on fewer sales, is his policy.

FARMERS BUSY AT HOME

Trailer selling works in rural areas, he says, because you can use it to show appliances to older people who dislike to leave their homes, or to farm wives who are just so busy that they haven't the time to come to town. He uses the trailer principally as a permanent showroom, taking it out only to follow up definite leads.

Good farmers have money, says Mr. Snyder, and not only want to buy, but can afford to do so. It's a mistake to classify farmers as lowest-price unit buyers, he declares. Most of his own sales have been in above-average price brackets. Radios are an exception, the farmers prefering the smaller, low-priced units for bedroom, kitchen, and barn use—so that the family can listen to their favorite programs while going about their daily chores.

So far, half of his sales have been for cash, with the rest financed by note, because of extra expenses the farm families in some instances have for wiring equipment in connecting onto the new high lines.

HyDroLoc Individual Lockers

have the call. Many unusual advantages not found in others.

Sold only thru distributors of refrigeration and insulation.

Get our proposition

Master Refrigerated Locker Systems, Inc.
121 Main St. Sioux City, Iowa

UNIVERSAL COOLER DETROIT

The Seal of Quality Since 1922

Newark Distributor For Philco In New Quarters

NEWARK, N. J.—Philco Distributors, Inc. has moved from 393 Central Ave. to new offices and showrooms in the Industrial Office building at 8 Pennington St. here. Featuring the opening was a showing of 1940 models of major appliances and air conditioning equipment.

Adjoining space in the building will house the company's parts and service departments.

CLASSIFIED ADVERTISING

RATES: Fifty words or less in 6-point light-face type only, one insertion, $2.00, additional words, four cents each. Three consecutive insertions $5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

POSITION WANTED

EXPERIENCED EXPORT manager wants position in export department of responsible manufacturer. Just returned to U. S. from six years abroad as sales representative in South and Central America. Speak and write English, Spanish, and Portuguese. Age 36, 10 years in refrigeration—household, commercial, parts, etc. Married. Residence Long Island, N. Y., but willing to move anywhere in U. S. Box No. 1196.

POSITIONS AVAILABLE

SALES MANAGER Commercial refrigeration wanted by Carrier distributor in excellent territory. Salary and override on gross sales. Give full details of experience in first letter which will be kept strictly confidential. Box No. 1197.

LARGE DETROIT DISTRIBUTOR has a permanent connection open for an experienced commercial refrigeration salesman representing a well known manufacturer with the oldest name in commercial refrigeration. Attractive remuneration. Give full particulars and experience confidentially in first letter. Box No. 1198, Air Conditioning & Refrigeration News.

WANTED—Refrigeration Engineer. Experienced in laying-out first-class commercial refrigeration installations and wiring diagrams; capable of testing equipment and supervising installations. Must have complete knowledge of refrigeration accessory parts. Write to Mr. O. H. Buschmann, Chief Engineer, COPELAND REFRIGERATION CORPORATION, Sidney, Ohio, stating age, education, experience, salary expected, references, etc.

WANTED — Ambitious and energetic Junior Engineer with 1 or 2 years practical experience for laboratory testing and research work on both household and commercial refrigeration condensing units. Write to Mr. O. H. BUSCHMANN, Chief Engineer, Copeland Refrigeration Corp., Sidney, Ohio, stating age, education, experience, salary expected, references, etc.

REPRESENTATIVES AVAILABLE

MANUFACTURER'S AGENT desires lines sold to refrigeration and air conditioning manufacturers and the trade for Detroit and State of Michigan. Have well equipped offices, good contacts and excellent sales personnel. Only interested in products of reputable concerns where unusual efforts will produce a substantial volume of business. Box No. 1199, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

REFRIGERATION SERVICING business for sale including tools, parts, supplies, refrigerators, car. 142-04 Holly Ave., Flushing, Long Island, New York.

FRANCHISES AVAILABLE

THE COUNTER FREEZER business is a big business—over $2,000,000 sales in 1939 to druggists alone. And druggists are not the best prospects. Market includes confectioners, restaurants, hotels, grocers, bakers, roadside stands, schools, hospitals, and thousands of other prospects you call on every day. Dozens of prospects in your city or town. Leading manufacturer with complete, nationally advertised line wants distributors for Indiana, Illinois, Missouri, Oklahoma, Kansas, Iowa, North and South Dakota, Colorado, Oregon, South Carolina, Alabama, Mississippi, West Virginia, New York State, and other valuable territories. Peak season starts soon, so write at once. Box No. 1193, Air Conditioning & Refrigeration News.

DIRECT FACTORY CONNECTION—Make all the profit yourself by selling refrigerator display cases, walk-in coolers, compressors, to meat markets, grocers. Financing arrangements for time sales. Write for full information, or see EHRLICH REFRIGERATOR MFG. CO., St. Joseph, Mo.

EQUIPMENT FOR SALE

FRIGIDAIRE ¾ H.P. Air cooled compressors for Freon or Methyl or ½ H.P. SO_2 twin cylinder 1¾-inch bore x 2½-inch stroke with shut-off valves 10 or 14 3/16-inch flywheels. Guaranteed like new in every respect. $20. GLOBE REFRIGERATOR CO., 1214 N. Water St., Milwaukee, Wis.

ELECTRIC WATER Coolers—Frigidaire bottle and pressure types, A.C. and D.C. —running condition—"As is"—From $10.00 to $30.00. For further details, call or write A. H. HENRY, 4216 13th Street, Long Island City, N. Y.

FREEZ-O—A perfect Meter Miser gas replacement, without changes in unit construction or oil change—cuts running time. In 2 lb. cylinders $2 per pound; 10 lbs., $1.75; 25 lbs., $1.50. STANDARD REFRIGERATION CO., 1148 Dohrman St., McKees Rocks, Pa.

REPAIR SERVICE

DOMESTIC TYPE thermostatic controls reconditioned like new. Precision work by experts. Years of satisfied customers, among largest in the country. All work guaranteed. Try us and be convinced. The largest thermostatic repair service in the country. It's your guarantee. Prices on request. UNITED REPAIR CO., INC., 342 W. 70th St., New York City.

CONTROL REPAIR service. Your controls repaired by expert mechanics, with special precision equipment. Supervised by graduate engineers. We stress perfection and dependability before price. One year guarantee on domestic controls. Any bellows operated device repaired. HALECTRIC LABORATORY, 1793 Lakeview Road, Cleveland, Ohio.

PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.

Finned Tube Products

Since 1907 for COOLING, HEATING and AIR CONDITIONING

Bush Mfg. Co. Hartford, Conn.

OPENS NEW PROFITABLE SALES FIELD

NEW 1940 INSTANT COLD Beverage COOLER

PERFECT EFFICIENT COOLING IN THE WARMEST WEATHER

They come through when the cooling efficiency is needed most

Liberal Distributorships are Available

Write for illustrated circulars and general catalog

E. B. MUZZARELLI and CO.
1421-27 Chestnut St., Kansas City, Mo.

Cash in on the swing to DIRECT DRAW DISPENSING EQUIPMENT!

The entire line of Perlick Direct Draw Dispensers that has pioneered in the field and won the favor of beer retailers everywhere, is available to Refrigeration dealers, to broaden their market and increase their profits. Dispensers are sold with or without compressor, but complete with evaporator and tapping equipment. Many models and styles—all thoroughly engineered and constructed. Write for complete information and prices, without obligation.

R. PERLICK BRASS CO.
IN MILWAUKEE

REFRIGERATION and AIR CONDITIONING PARTS and EQUIPMENT

12

TO SERVE YOU MORE QUICKLY . . 12 CONVENIENTLY LOCATED WAREHOUSES

WRITE FOR CATALOG ON YOUR LETTERHEAD

THE HARRY ALTER CO.
1728 S. MICHIGAN AVENUE, CHICAGO, ILLINOIS
3 CHICAGO BRANCHES, NORTH, WEST, SOUTH

NEW YORK BROOKLYN BRONX JAMAICA
NEWARK DETROIT CLEVELAND ST. LOUIS

BUILT FOR SERVICE . . . PRICED FOR SALES

"THE FOOD MERCHANT"

- Porcelain interior and exterior
- Three-glass display
- Rubber doors and jambs
- Self defrosting coils

8 FT. DOUBLE DUTY CASE, AS SHOWN $275 Net F.O.B. Factory

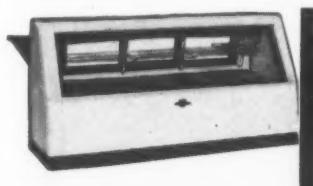
WRITE FOR DETAILS NOW! Department M-3

GENERAL REFRIGERATOR COMPANY — 5th & Bainbridge Sts. PHILADELPHIA, PA.

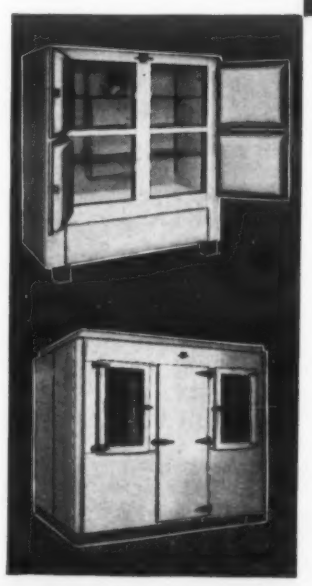
You never get a "Wrong Number" when you depend on the RANCO LINE of Household and Commercial Controls.

RANCO Built to Save the Time of SERVICE MEN! CONTROLS

RANCO INC., Columbus, Ohio U.S.A.



THE 1940 KOCH LINE



The Koch line of commercial refrigerator cabinets is complete . . . profitable . . . easy to sell. It includes refrigerators for groceries, meat markets, taverns, bakeries, florists, and institutions; as well as display cases and walk-in coolers. Koch sells no condensing units. Any standard commercial unit will refrigerate Koch cabinets. Big money here for qualified distributors.

FREE CATALOG

A new 102 page catalog in color. Get your copy. Ask for franchise information. Write

KOCH REFRIGERATORS
NORTH KANSAS CITY, MISSOURI

Network Television Gets Formal Trial

(Concluded from Page 1, Column 1)
made possible by the use of General Electric's new relay station working in conjunction with its main transmitter atop the Helderberg mountains.

Although telecast programs had been received at the Helderberg relay station before in tests, the FCC demonstration marked the first time that such programs had been rebroadcast for the entertainment of persons in the area served by the local station.

Both image and voice were considered excellent by members of the commission, and were termed equally as good as programs originating in the Schenectady studio.

So far as known, this was the first time a television program has actually been rebroadcast over any such distance and from a point more than a mile below the line of sight.

Members of the commission who viewed this epochal program were Chairman James Lawrence Fly, Commissioners Paul A. Walker and Thad H. Brown, and Secretary T. J. Slowie. With them were Dr. L. P. Wheeler, W. H. Bauer, and G. O. Gillingham of their staff.

Among those in the General Electric group accompanying the commissioners on their tour of inspection of the company's television facilities were Dr. W. R. G. Baker, manager of radio and television; Chester H. Lang, manager of broadcasting and advertising; Dr. E. F. W. Alexanderson, radio expert and scientist.

By the use of the new relaying equipment, located 1.2 miles from the main transmitter atop the Helderberg mountains, 12 miles from Schenectady, television broadcasts from New York City will become available to "Capital District" residents within the range of G-E's station W2XB.

The programs transmitted from New York City are received at the relay station on the 44-50 megacycle band by means of a rhombic antenna that resembles two diamonds placed end to end and supported by four 128-foot towers. They then pass through an amplifier, a part of the antenna structure, that increases the signal strength about 20 times before it enters a wire line leading to the relay receiving station located beneath the antenna. Here the radio signals from New York City are changed to sound and picture signals.

By means of a low-power 10-watt transmitter the picture part of the programs is then relayed on a carrier wave of 156-162 megacycles from a small transmitting antenna to the main Helderberg station. This transmitter is similar to the diamond-shaped one used to pick up the programs from New York City, but is only 10 feet across as compared with the 400 feet of the receiving antenna.

At the main transmitter a dipole antenna picks up the picture part of the relayed program and feeds it to the transmitter where the frequency is converted to the 66-72 megacycle level and amplified to 10 kilowatts.

The sound part of the program is relayed from the receiving station to the main transmitter by wire line. There it modulates a standard 10-kilowatt ultra-high-frequency transmitter, and the programs are then broadcast from two antennas above the transmitter to listeners in the Capital District.

The relay station is located 129 air line miles from New York City and stands 1,700 feet above sea level, with the rhombic antenna 128 feet above. The main transmitter is at an altitude of 1,520 feet with 60-foot antennas above.

General Electric's television transmitter has been operating experimentally with programs every Monday night for several weeks. Now with the relay station in operation, permitting NBC programs to be added to the local station's programs, it is expected the new local station will soon be officially opened. No definite date has yet been set, however.

Burkman Heads S-W Omaha Territory

OMAHA, Neb. — John Burkman, formerly in the Des Moines district, has been made district representative for Stewart-Warner in this territory.

Hertzler General Sales Manager For York

(Concluded from Page 1, Column 2)
ing course in 1927 and after two years training joined the air conditioning department. In 1930 he became active in sales engineering work in the corporation's New York territory and in 1935 returned to York as manager of the air conditioning division.

In 1937, Mr. Hertzler was appointed general representative and last week was given the important post of general sales manager, a position until recently occupied by Mr. Lauer, president of the corporation.

During his air conditioning sales experience he has been closely associated with Consolidated Film Industries, Clyde Mallory and United Fruit precooling plants, and F. W. Woolworth Co.

Mr. Meisenhelder was born in York in 1889 and joined the York Mfg. Co. (the present York Ice Machinery Corp.) in 1906 as a clerk in the pipe shop office of the factory at York. In 1917 he became manager of the factory order department and in 1920 joined the York Products Corp., which was at that time the exclusive York distributor for the entire western part of the United States, as manager of the accessories division.

In 1930 he returned to York as assistant to Mr. Lauer, who was then general sales manager, and was today appointed assistant to the president.

Tests Show Low Cost of Air Cooler Operation

(Concluded from Page 1, Column 2)
of the year (November through March) was $82.82 or $0.55 per day. Total yearly operating cost amounted to $617.10 or an average of $1.69 per day. Electric rates are based on 1.1 cents per kwh. exclusive of the demand charge which averages approximately $30 per month throughout the summer months.

The Empire Cafe has a total of 12 installed horsepower. Operating cost for the cooling months of May through November was $381.82 or $1.79 per day. Electric rates are based on an average of about 1.7 cents per kwh. exclusive of the demand charge of about $14 per month.

The highest expense for both was in August, when cooling costs in the Barnes building were $109.20 for the two office floors and $82.08 for the Empire Cafe.

Alex Dow Retires as Detroit Edison Head

DETROIT — Retirement of Alex Dow as president of the Detroit Edison Co. and appointment of Alfred C. Marshall as his successor were announced following a meeting of the company's board of directors.

Mr. Dow, who is 78 years old, will continue as a director and become chairman of the executive committee. Directors stated there would be no changes in the policies and operations of the company.

Mr. Marshall has been associated with Mr. Dow in utility work since 1894 and has been vice president and general manager of the Edison company since 1923.

H. F. Heyman, Veteran In Appliance Selling, Dies

TOLEDO — Homer F. Heyman, sales manager of Westinghouse Electric Supply Co. and an appliance salesman here for more than 30 years, died last week in St. Vincent's hospital following an operation. He was 53 years old.

Mr. Heyman, "Hy" to his friends in the industry, had been associated with J. W. Greene Co., former Toledo Westinghouse distributor, as field representative and later as sales manager. He also had sold appliances for Toledo Edison Co., and for several years operated the Thor Shop, specializing in home laundry equipment.

He is survived by his widow, two sons, and four daughters. Funeral services were held Feb. 2.

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